May 23, 2014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 140-1353-1

SDG Number: W06725

Job Description: F12-025

For:
CH2M Hill Plateau Remediation Company
PO BOX 1600
Mail Stop R3-50
Richland, WA 99352

Attention: Mr. Scot Fitzgerald

Approved for release.
Jamie A McKinney
Senior Project Manager
5/20/2014 10:01 AM

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05/20/2014

The test results in this report meet all 2003 NELAC and 2003 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
cn	Refer to Case Narrative for further detail
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-1353-1

Comments
No additional comments.

Receipt
The samples were received on 5/14/2014 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Air - GC/MS VOA
Method(s) TO 14A, TO 15 LL, TO-14A, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method(s) TO 15 LL: There is a significant contribution from an interfering non-target analyte to the quantitation of acetone in samples B2WM02 and B2WM04. Therefore, the acetone results are biased high and should be considered estimated. The result is flagged with “cn”.

No other analytical or quality issues were noted.

Client Sample ID: B2WM02 — Lab Sample ID: 140-1353-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	8.7	E cn	2.0	0.54	ppb v/v	1		TO 15 LL	Total/NA
Benzene	1.2		0.080	0.023	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	49	E	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	2.8		0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.25		0.20	0.13	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.069		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA
Acetone - DL	5.9	J	20	5.4	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride - DL	39		0.80	0.15	ppb v/v	1		TO 15 LL	Total/NA

Client Sample ID: B2WM03 — Lab Sample ID: 140-1353-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.8		2.0	0.54	ppb v/v	1.57		TO 15 LL	Total/NA
Benzene	3.2		0.080	0.023	ppb v/v	1.57		TO 15 LL	Total/NA
Carbon tetrachloride	39	E	0.080	0.015	ppb v/v	1.57		TO 15 LL	Total/NA
Chloroform	2.3		0.080	0.015	ppb v/v	1.57		TO 15 LL	Total/NA
Methylene Chloride	0.25		0.20	0.13	ppb v/v	1.57		TO 15 LL	Total/NA
Trichloroethene	0.24		0.040	0.014	ppb v/v	1.57		TO 15 LL	Total/NA
Carbon tetrachloride - DL	33		0.31	0.059	ppb v/v	1.57		TO 15 LL	Total/NA

Client Sample ID: B2WM04 — Lab Sample ID: 140-1353-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.7	cn	2.0	0.54	ppb v/v	1.47		TO 15 LL	Total/NA
Benzene	2.1		0.080	0.023	ppb v/v	1.47		TO 15 LL	Total/NA
Carbon tetrachloride	46	E	0.080	0.015	ppb v/v	1.47		TO 15 LL	Total/NA
Chloroform	2.5		0.080	0.015	ppb v/v	1.47		TO 15 LL	Total/NA
Methylene Chloride	0.27		0.20	0.13	ppb v/v	1.47		TO 15 LL	Total/NA
Trichloroethene	0.16		0.040	0.014	ppb v/v	1.47		TO 15 LL	Total/NA
Carbon tetrachloride - DL	41		0.59	0.11	ppb v/v	1.47		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: B2WM02
Lab Sample ID: 140-1353-1

Date Collected: 05/13/14 08:11
Matrix: Air
Date Received: 05/14/14 09:40
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			05/15/14 19:33	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			05/15/14 19:33	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			05/15/14 19:33	1
Acetone	**8.7**	**E cn**	2.0	0.54	ppb v/v			05/15/14 19:33	1
Benzene	**1.2**		0.080	0.023	ppb v/v			05/15/14 19:33	1
Carbon tetrachloride	**49**	**E**	0.080	0.015	ppb v/v			05/15/14 19:33	1
Chloroform	**2.8**		0.080	0.015	ppb v/v			05/15/14 19:33	1
Dibromochloromethane	ND		0.080	0.017	ppb v/v			05/15/14 19:33	1
Methylene Chloride	**0.25**		0.20	0.13	ppb v/v			05/15/14 19:33	1
Trichloroethene	**0.069**		0.040	0.014	ppb v/v			05/15/14 19:33	1
Vinyl chloride	ND		0.080	0.029	ppb v/v			05/15/14 19:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*60 - 140*		*05/15/14 19:33*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**5.9**	**J**	20	5.4	ppb v/v			05/16/14 12:21	1
Carbon tetrachloride	**39**		0.80	0.15	ppb v/v			05/16/14 12:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*05/16/14 12:21*	*1*

Client Sample ID: B2WM03
Lab Sample ID: 140-1353-2

Date Collected: 05/13/14 09:12
Matrix: Air
Date Received: 05/14/14 09:40
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			05/15/14 20:33	1.57
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			05/15/14 20:33	1.57
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			05/15/14 20:33	1.57
Acetone	**5.8**		2.0	0.54	ppb v/v			05/15/14 20:33	1.57
Benzene	**3.2**		0.080	0.023	ppb v/v			05/15/14 20:33	1.57
Carbon tetrachloride	**39**	**E**	0.080	0.015	ppb v/v			05/15/14 20:33	1.57
Chloroform	**2.3**		0.080	0.015	ppb v/v			05/15/14 20:33	1.57
Dibromochloromethane	ND		0.080	0.017	ppb v/v			05/15/14 20:33	1.57
Methylene Chloride	**0.25**		0.20	0.13	ppb v/v			05/15/14 20:33	1.57
Trichloroethene	**0.24**		0.040	0.014	ppb v/v			05/15/14 20:33	1.57
Vinyl chloride	ND		0.080	0.029	ppb v/v			05/15/14 20:33	1.57

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*05/15/14 20:33*	*1.57*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**33**		0.31	0.059	ppb v/v			05/16/14 13:16	1.57

Client Sample ID: B2WM03
Lab Sample ID: 140-1353-2

Date Collected: 05/13/14 09:12
Matrix: Air
Date Received: 05/14/14 09:40
Sample Container: Summa Canister 6L

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		60 - 140		05/16/14 13:16	1.57

Client Sample ID: B2WM04
Lab Sample ID: 140-1353-3

Date Collected: 05/13/14 10:13
Matrix: Air
Date Received: 05/14/14 09:40
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			05/15/14 21:32	1.47
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			05/15/14 21:32	1.47
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			05/15/14 21:32	1.47
Acetone	**2.7**	**cn**	2.0	0.54	ppb v/v			05/15/14 21:32	1.47
Benzene	**2.1**		0.080	0.023	ppb v/v			05/15/14 21:32	1.47
Carbon tetrachloride	**46**	**E**	0.080	0.015	ppb v/v			05/15/14 21:32	1.47
Chloroform	**2.5**		0.080	0.015	ppb v/v			05/15/14 21:32	1.47
Dibromochloromethane	ND		0.080	0.017	ppb v/v			05/15/14 21:32	1.47
Methylene Chloride	**0.27**		0.20	0.13	ppb v/v			05/15/14 21:32	1.47
Trichloroethene	**0.16**		0.040	0.014	ppb v/v			05/15/14 21:32	1.47
Vinyl chloride	ND		0.080	0.029	ppb v/v			05/15/14 21:32	1.47

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140		05/15/14 21:32	1.47

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**41**		0.59	0.11	ppb v/v			05/16/14 14:11	1.47

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		60 - 140		05/16/14 14:11	1.47

Default Detection Limits

May 28, 2014

Client: CH2M Hill Plateau Remediation Company
Project/Site: F12-025

TestAmerica Job ID: 140-1353-1
SDG: W06725

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
Acetone	2.0	0.54	ppb v/v	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Dibromochloromethane	0.080	0.017	ppb v/v	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Vinyl chloride	0.080	0.029	ppb v/v	TO 15 LL

Surrogate Summary

May 23, 2014

Client: CH2M Hill Plateau Remediation Company
Project/Site: F12-025

TestAmerica Job ID: 140-1353-1
SDG: W06725

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**BFB (60-140)**							
140-1353-1	B2WM02	107							
140-1353-1 - DL	B2WM02	103							
140-1353-2	B2WM03	104							
140-1353-2 - DL	B2WM03	104							
140-1353-3	B2WM04	102							
140-1353-3 - DL	B2WM04	103							
LCS 140-1222/1002	Lab Control Sample	113							
LCS 140-1228/1002	Lab Control Sample	112							
MB 140-1222/4	Method Blank	100							
MB 140-1228/5	Method Blank	100							

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-1222/4 — **Client Sample ID: Method Blank**
Matrix: Air — **Prep Type: Total/NA**
Analysis Batch: 1222

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			05/15/14 12:25	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			05/15/14 12:25	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			05/15/14 12:25	1
Acetone	ND		2.0	0.54	ppb v/v			05/15/14 12:25	1
Benzene	ND		0.080	0.023	ppb v/v			05/15/14 12:25	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			05/15/14 12:25	1
Chloroform	ND		0.080	0.015	ppb v/v			05/15/14 12:25	1
Dibromochloromethane	ND		0.080	0.017	ppb v/v			05/15/14 12:25	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			05/15/14 12:25	1
Trichloroethene	ND		0.040	0.014	ppb v/v			05/15/14 12:25	1
Vinyl chloride	ND		0.080	0.029	ppb v/v			05/15/14 12:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*05/15/14 12:25*	*1*

Lab Sample ID: LCS 140-1222/1002 — **Client Sample ID: Lab Control Sample**
Matrix: Air — **Prep Type: Total/NA**
Analysis Batch: 1222

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	2.00	2.33		ppb v/v		117	70 - 130
1,1-Dichloroethene	2.00	2.12		ppb v/v		106	70 - 130
1,2-Dichloroethane	2.00	2.49		ppb v/v		124	70 - 130
Acetone	6.00	4.48		ppb v/v		75	60 - 140
Benzene	2.00	2.11		ppb v/v		106	70 - 130
Carbon tetrachloride	2.00	2.00		ppb v/v		100	70 - 130
Chloroform	2.00	2.28		ppb v/v		114	70 - 130
Dibromochloromethane	2.00	1.91		ppb v/v		95	70 - 130
Methylene Chloride	2.00	2.19		ppb v/v		109	70 - 130
Trichloroethene	2.00	1.91		ppb v/v		95	70 - 130
Vinyl chloride	2.00	2.51		ppb v/v		125	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*60 - 140*

Lab Sample ID: MB 140-1228/5 — **Client Sample ID: Method Blank**
Matrix: Air — **Prep Type: Total/NA**
Analysis Batch: 1228

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			05/16/14 09:43	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			05/16/14 09:43	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			05/16/14 09:43	1
Acetone	ND		2.0	0.54	ppb v/v			05/16/14 09:43	1
Benzene	ND		0.080	0.023	ppb v/v			05/16/14 09:43	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			05/16/14 09:43	1
Chloroform	ND		0.080	0.015	ppb v/v			05/16/14 09:43	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-1228/5 — **Client Sample ID: Method Blank**
Matrix: Air — **Prep Type: Total/NA**
Analysis Batch: 1228

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		0.080	0.017	ppb v/v			05/16/14 09:43	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			05/16/14 09:43	1
Trichloroethene	0.0500		0.040	0.014	ppb v/v			05/16/14 09:43	1
Vinyl chloride	ND		0.080	0.029	ppb v/v			05/16/14 09:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*05/16/14 09:43*	*1*

Lab Sample ID: LCS 140-1228/1002 — **Client Sample ID: Lab Control Sample**
Matrix: Air — **Prep Type: Total/NA**
Analysis Batch: 1228

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	2.00	2.11		ppb v/v		106	70 - 130
1,1-Dichloroethene	2.00	2.06		ppb v/v		103	70 - 130
1,2-Dichloroethane	2.00	2.42		ppb v/v		121	70 - 130
Acetone	6.00	4.59		ppb v/v		76	60 - 140
Benzene	2.00	2.12		ppb v/v		106	70 - 130
Carbon tetrachloride	2.00	1.96		ppb v/v		98	70 - 130
Chloroform	2.00	2.11		ppb v/v		105	70 - 130
Dibromochloromethane	2.00	2.06		ppb v/v		103	70 - 130
Methylene Chloride	2.00	2.06		ppb v/v		103	70 - 130
Trichloroethene	2.00	1.86		ppb v/v		93	70 - 130
Vinyl chloride	2.00	2.45		ppb v/v		123	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*60 - 140*

Air - GC/MS VOA

Analysis Batch: 1222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-1353-1	B2WM02	Total/NA	Air	TO 15 LL	
140-1353-2	B2WM03	Total/NA	Air	TO 15 LL	
140-1353-3	B2WM04	Total/NA	Air	TO 15 LL	
LCS 140-1222/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	
MB 140-1222/4	Method Blank	Total/NA	Air	TO 15 LL	

Analysis Batch: 1228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-1353-1 - DL	B2WM02	Total/NA	Air	TO 15 LL	
140-1353-2 - DL	B2WM03	Total/NA	Air	TO 15 LL	
140-1353-3 - DL	B2WM04	Total/NA	Air	TO 15 LL	
LCS 140-1228/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	
MB 140-1228/5	Method Blank	Total/NA	Air	TO 15 LL	

Client Sample ID: B2WM02 — Lab Sample ID: 140-1353-1

Date Collected: 05/13/14 08:11 — **Matrix: Air**

Date Received: 05/14/14 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	1222	05/15/14 19:33	HMT	TAL KNX
	Instrument ID: MJ									
Total/NA	Analysis	TO 15 LL	DL	1	50 mL	500 mL	1228	05/16/14 12:21	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: B2WM03 — Lab Sample ID: 140-1353-2

Date Collected: 05/13/14 09:12 — **Matrix: Air**

Date Received: 05/14/14 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.57	785 mL	500 mL	1222	05/15/14 20:33	HMT	TAL KNX
	Instrument ID: MJ									
Total/NA	Analysis	TO 15 LL	DL	1.57	200 mL	500 mL	1228	05/16/14 13:16	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: B2WM04 — Lab Sample ID: 140-1353-3

Date Collected: 05/13/14 10:13 — **Matrix: Air**

Date Received: 05/14/14 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.47	735 mL	500 mL	1222	05/15/14 21:32	HMT	TAL KNX
	Instrument ID: MJ									
Total/NA	Analysis	TO 15 LL	DL	1.47	100 mL	500 mL	1228	05/16/14 14:11	HMT	TAL KNX
	Instrument ID: MJ									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Certification Summary

May 28, 2014

Client: CH2M Hill Plateau Remediation Company
Project/Site: F12-025

TestAmerica Job ID: 140-1353-1
SDG: W06725

Laboratory: TestAmerica Knoxville

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
	AFCEE		N/A	
Arkansas DEQ	State Program	6	88-0688	06-17-14
California	State Program	9	2423	06-30-14
Colorado	State Program	8	N/A	02-28-15
Connecticut	State Program	1	PH-0223	09-30-15
Florida	NELAP	4	E87177	06-30-14
Georgia	State Program	4	906	06-13-14
Hawaii	State Program	9	N/A	04-13-15
Iowa	State Program	7	375	08-01-14
Kansas	NELAP	7	E-10349	10-31-14
Kentucky (DW)	State Program	4	90101	12-31-14
L-A-B	DoD ELAP		L2311	02-13-16
Louisiana	NELAP	6	LA110001	12-31-14
Maryland	State Program	3	277	03-31-15
Michigan	State Program	5	9933	04-13-14 *
Nevada	State Program	9	TN00009	07-31-14
New Jersey	NELAP	2	TN001	06-30-14
New York	NELAP	2	10781	03-31-15
North Carolina DENR	State Program	4	64	12-31-14
North Carolina DHHS	State Program	4	21705	07-31-14
Ohio VAP	State Program	5	CL0059	03-26-15
Oklahoma	State Program	6	9415	08-31-14
Pennsylvania	NELAP	3	68-00576	12-31-14
South Carolina	State Program	4	84001	06-30-14
Tennessee	State Program	4	2014	04-13-17
Texas	NELAP	6	T104704380-TX	08-31-14
USDA	Federal		P330-13-00260	08-29-16
Utah	NELAP	8	QUAN3	07-31-14
Virginia	NELAP	3	460176	09-14-14
Virginia	State Program	3	165	06-30-14
Washington	State Program	10	C593	01-19-15
West Virginia DEP	State Program	3	345	04-30-15
West Virginia DHHR	State Program	3	9955C	12-31-14
Wisconsin	State Program	5	998044300	08-31-14

* Expired certification is currently pending renewal and is considered valid.

Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F12-025

TestAmerica Job ID: 140-1353-1
SDG: W06725

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

May 23, 2014

Client: CH2M Hill Plateau Remediation Company
Project/Site: F12-025

TestAmerica Job ID: 140-1353-1
SDG: W06725

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-1353-1	B2WM02	Air	05/13/14 08:11	05/14/14 09:40
140-1353-2	B2WM03	Air	05/13/14 09:12	05/14/14 09:40
140-1353-3	B2WM04	Air	05/13/14 10:13	05/14/14 09:40

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II

AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
B2WM02	140-1353-1	107
B2WM02 DL	140-1353-1 DL	103
B2WM03	140-1353-2	104
B2WM03 DL	140-1353-2 DL	104
B2WM04	140-1353-3	102
B2WM04 DL	140-1353-3 DL	103
	MB 140-1222/4	100
	MB 140-1228/5	100
	LCS 140-1222/1002	113
	LCS 140-1228/1002	112

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III

AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Matrix: Air Level: Low Lab File ID: JCCVE15-LCS.d

Lab ID: LCS 140-1222/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	2.00	2.33	117	70-130	
1,1-Dichloroethene	2.00	2.12	106	70-130	
1,2-Dichloroethane	2.00	2.49	124	70-130	
Acetone	6.00	4.48	75	60-140	
Benzene	2.00	2.11	106	70-130	
Carbon tetrachloride	2.00	2.00	100	70-130	
Chloroform	2.00	2.28	114	70-130	
Dibromochloromethane	2.00	1.91	95	70-130	
Methylene Chloride	2.00	2.19	109	70-130	
Trichloroethene	2.00	1.91	95	70-130	
Vinyl chloride	2.00	2.51	125	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM III

AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Matrix: Air Level: Low Lab File ID: JCCVE16-LCS.d

Lab ID: LCS 140-1228/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	2.00	2.11	106	70-130	
1,1-Dichloroethene	2.00	2.06	103	70-130	
1,2-Dichloroethane	2.00	2.42	121	70-130	
Acetone	6.00	4.59	76	60-140	
Benzene	2.00	2.12	106	70-130	
Carbon tetrachloride	2.00	1.96	98	70-130	
Chloroform	2.00	2.11	105	70-130	
Dibromochloromethane	2.00	2.06	103	70-130	
Methylene Chloride	2.00	2.06	103	70-130	
Trichloroethene	2.00	1.86	93	70-130	
Vinyl chloride	2.00	2.45	123	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV

AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Lab File ID: MB500mL.D Lab Sample ID: MB 140-1222/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 05/15/2014 12:25

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-1222/1002	JCCVE15-LCS .d	05/15/2014 10:30
B2WM02	140-1353-1	JE15P106.D	05/15/2014 19:33
B2WM04	140-1353-3	JE15P108.D	05/15/2014 21:32

FORM IV TO 15 LL

FORM IV

AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Lab File ID: MB500mL.D Lab Sample ID: MB 140-1228/5

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 05/16/2014 09:43

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
B2WM02 DL	140-1353-1 DL	JE16P106.D	05/16/2014 12:21
B2WM03 DL	140-1353-2 DL	JE16P107.D	05/16/2014 13:16
B2WM04 DL	140-1353-3 DL	JE16P108.D	05/16/2014 14:11

FORM V

AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Lab File ID: JBFBC11.D BFB Injection Date: 03/11/2014

Instrument ID: MJ BFB Injection Time: 12:12

Analysis Batch No.: 946

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.6	
75	30.0 - 60.0 % of mass 95	41.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.4	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	111.2	
175	5.0 - 9.0 % of mass 174	8.5	(7.7)1
176	95.0 - 101.0 % of mass 174	108.1	(97.2)1
177	5.0 - 9.0 % of mass 176	7.2	(6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-946/2	JICC111.D	03/11/2014	12:40
	IC 140-946/3	JICC112.D	03/11/2014	13:35
	IC 140-946/4	JICC113.D	03/11/2014	14:29
	IC 140-946/5	JICC114.D	03/11/2014	15:23
	IC 140-946/6	JICC115.D	03/11/2014	16:17
	ICIS 140-946/7	JICC116.D	03/11/2014	17:11
	IC 140-946/8	JICC117.D	03/11/2014	18:06
	IC 140-946/9	JICC118.D	03/11/2014	19:02
	IC 140-946/10	JICC119.D	03/11/2014	19:57
	ICV 140-946/14	JLCSC11.D	03/11/2014	23:33

FORM V

AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Lab File ID: JBFBE15.D BFB Injection Date: 05/15/2014

Instrument ID: MJ BFB Injection Time: 10:00

Analysis Batch No.: 1222

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.1	
75	30.0 - 60.0 % of mass 95	46.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.4	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	96.3	
175	5.0 - 9.0 % of mass 174	7.0	(7.3)1
176	95.0 - 101.0 % of mass 174	94.1	(97.7)1
177	5.0 - 9.0 % of mass 176	6.3	(6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-1222/2	JCCVE15.D	05/15/2014	10:30
	LCS 140-1222/1002	JCCVE15-LCS.d	05/15/2014	10:30
	MB 140-1222/4	MB500mL.D	05/15/2014	12:25
B2WM02	140-1353-1	JE15P106.D	05/15/2014	19:33
B2WM03	140-1353-2	JE15P107.D	05/15/2014	20:33
B2WM04	140-1353-3	JE15P108.D	05/15/2014	21:32

May 23, 2014

FORM V

AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Lab File ID: JBFBE16.D BFB Injection Date: 05/16/2014

Instrument ID: MJ BFB Injection Time: 06:51

Analysis Batch No.: 1228

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.0	
75	30.0 - 60.0 % of mass 95	46.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.3	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	98.5	
175	5.0 - 9.0 % of mass 174	7.4	(7.5)1
176	95.0 - 101.0 % of mass 174	95.7	(97.2)1
177	5.0 - 9.0 % of mass 176	6.4	(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-1228/2	JCCVE16.D	05/16/2014	07:18
	LCS 140-1228/1002	JCCVE16-LCS.d	05/16/2014	07:18
	MB 140-1228/5	MB500mL.D	05/16/2014	09:43
B2WM02 DL	140-1353-1 DL	JE16P106.D	05/16/2014	12:21
B2WM03 DL	140-1353-2 DL	JE16P107.D	05/16/2014	13:16
B2WM04 DL	140-1353-3 DL	JE16P108.D	05/16/2014	14:11

FORM VIII

AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Sample No.: ICIS 140-946/7 Date Analyzed: 03/11/2014 17:11

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JICC116.D Heated Purge: (Y/N) N

Calibration ID: 143

		CBM		DFB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		351204	9.39	1664083	11.55	1450172	16.21
UPPER LIMIT		491686	9.72	2329716	11.88	2030241	16.54
LOWER LIMIT		210722	9.06	998450	11.22	870103	15.88
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-946/14		326764	9.39	1541489	11.55	1315171	16.21

CBM = Chlorobromomethane (IS)
DFB = 1,4-Difluorobenzene
CBZ = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

May 23, 2014

FORM VIII

AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Sample No.: CCVIS 140-1222/2 Date Analyzed: 05/15/2014 10:30

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVE15.D Heated Purge: (Y/N) N

Calibration ID: 143

		CBM		DFB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		190618	9.32	884388	11.48	733477	16.15
UPPER LIMIT		266865	9.65	1238143	11.81	1026868	16.48
LOWER LIMIT		114371	8.99	530633	11.15	440086	15.82
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-1222/1002		190618	9.32	884388	11.48	733477	16.15
MB 140-1222/4		234071	9.31	1163562	11.47	927675	16.14
140-1353-1	B2WM02	229371	9.32	1060864	11.47	853854	16.14
140-1353-2	B2WM03	235573	9.31	1064807	11.47	859450	16.14
140-1353-3	B2WM04	241348	9.31	1106957	11.47	904047	16.14

CBM = Chlorobromomethane (IS)
DFB = 1,4-Difluorobenzene
CBZ = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

May 23, 2014

FORM VIII

AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Sample No.: CCVIS 140-1228/2 Date Analyzed: 05/16/2014 07:18

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVE16.D Heated Purge: (Y/N) N

Calibration ID: 143

		CBM		DFB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		202717	9.31	877830	11.47	713396	16.14
UPPER LIMIT		283804	9.64	1228962	11.80	998754	16.47
LOWER LIMIT		121630	8.98	526698	11.14	428038	15.81
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-1228/1002		202717	9.31	877830	11.47	713396	16.14
MB 140-1228/5		233782	9.31	1066738	11.46	842601	16.14
140-1353-1 DL	B2WM02 DL	217799	9.31	1098804	11.47	918043	16.14
140-1353-2 DL	B2WM03 DL	224136	9.31	1055696	11.47	856424	16.14
140-1353-3 DL	B2WM04 DL	213027	9.31	983794	11.47	780971	16.14

CBM = Chlorobromomethane (IS)
DFB = 1,4-Difluorobenzene
CBZ = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I

AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Client Sample ID: B2WM02 Lab Sample ID: 140-1353-1

Matrix: Air Lab File ID: JE15P106.D

Analysis Method: TO 15 LL Date Collected: 05/13/2014 08:11

Sample wt/vol: 500(mL) Date Analyzed: 05/15/2014 19:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 1222 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.080	0.012
75-35-4	1,1-Dichloroethene	ND		0.080	0.014
107-06-2	1,2-Dichloroethane	ND		0.080	0.019
67-64-1	*Acetone*	*8.7*	*E cn*	*2.0*	*0.54*
71-43-2	Benzene	1.2		0.080	0.023
56-23-5	*Carbon tetrachloride*	*49*	*E*	*0.080*	*0.015*
67-66-3	Chloroform	2.8		0.080	0.015
124-48-1	Dibromochloromethane	ND		0.080	0.017
75-09-2	Methylene Chloride	0.25		0.20	0.13
79-01-6	Trichloroethene	0.069		0.040	0.014
75-01-4	Vinyl chloride	ND		0.080	0.029

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P106.D				
Lims ID:	140-1353-A-1	Lab Sample ID:	140-1353-1		
Client ID:	B2WM02				
Sample Type:	Client				
Inject. Date:	15-May-2014 19:33:30	ALS Bottle#:	6	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-1353-a-1				
Misc. Info.:	J051514,TO15,,140-0000681-012				
Operator ID:	7126	Instrument ID:	MJ		

Method:	\\KNXCHROM\ChromData\MJ\20140514-681.b\MJ_TO15.m		
Limit Group:	MSA TO14A_15 Routine ICAL		
Last Update:	16-May-2014 07:07:46	Calib Date:	11-Mar-2014 19:57:30
Integrator:	RTE	ID Type:	RT Order ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D		

Column 1 :	RTX-5 (0.32 mm)	Det: MS SCAN
Process Host:	XAWRK003	

First Level Reviewer: tajh Date: 16-May-2014 06:25:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.317	9.318	-0.001	95	229371	4.00	
* 2 1,4-Difluorobenzene	114	11.474	11.475	-0.001	96	1060864	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.144	16.145	-0.001	89	853854	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.763	17.769	-0.006	80	644011	4.26	
23 Acetone	58	5.724	5.730	-0.006	98	282073	8.65	E
31 Methylene Chloride	84	6.708	6.709	-0.001	88	15094	0.2460	
43 Chloroform	83	9.328	9.329	-0.001	78	371133	2.78	
48 Benzene	78	10.958	10.953	0.005	43	216219	1.19	
50 Carbon tetrachloride	117	10.980	10.980	0.000	99	7306208	48.6	E
56 Trichloroethene	130	12.179	12.180	-0.001	71	6091	0.0690	

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

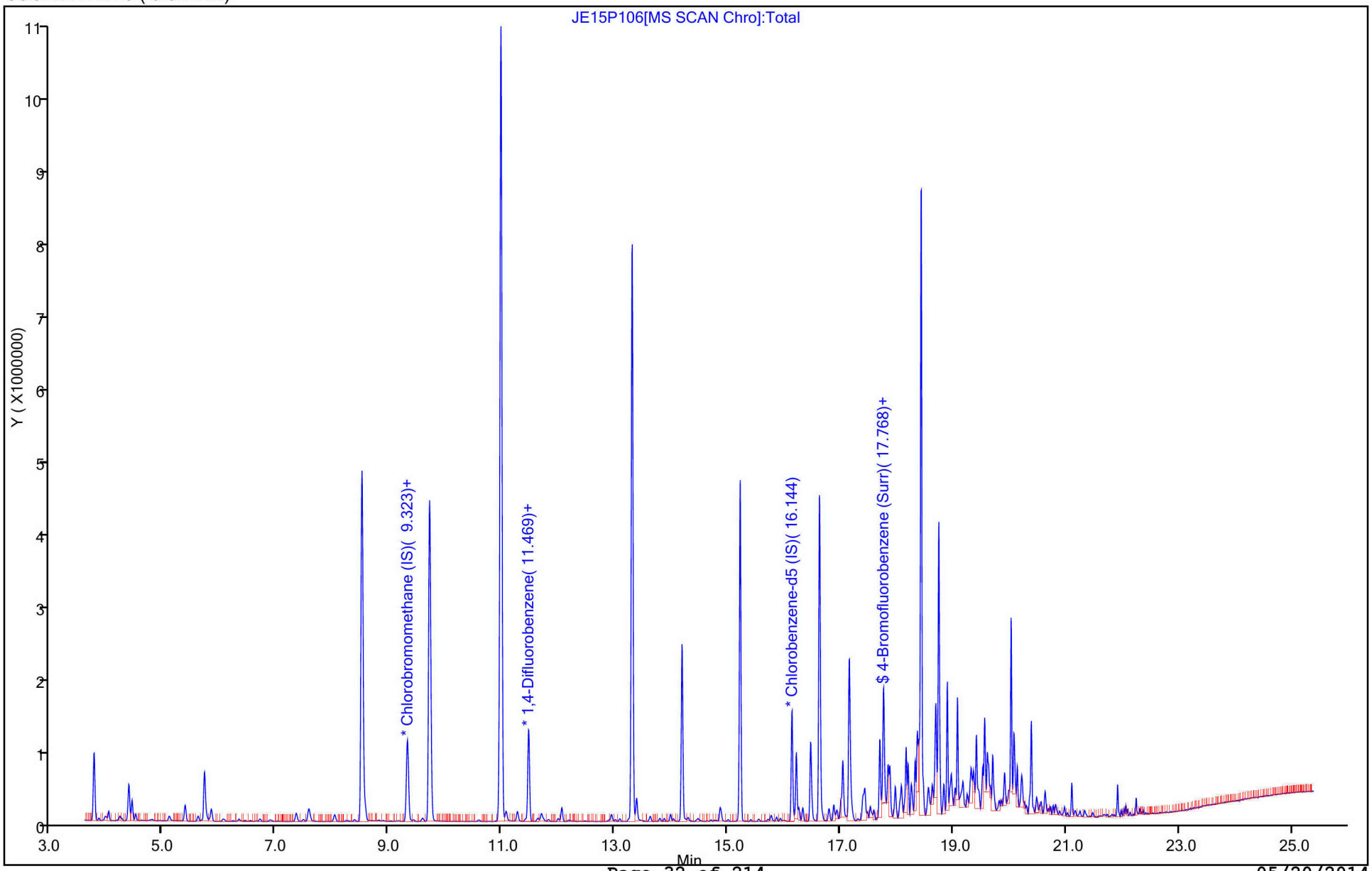
Report Date: 16-May-2014 07:08:34 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P106.D				
Injection Date:	15-May-2014 19:33:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-1353-A-1	Lab Sample ID:	140-1353-1	Worklist Smp#:	12
Client ID:	B2WM02				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



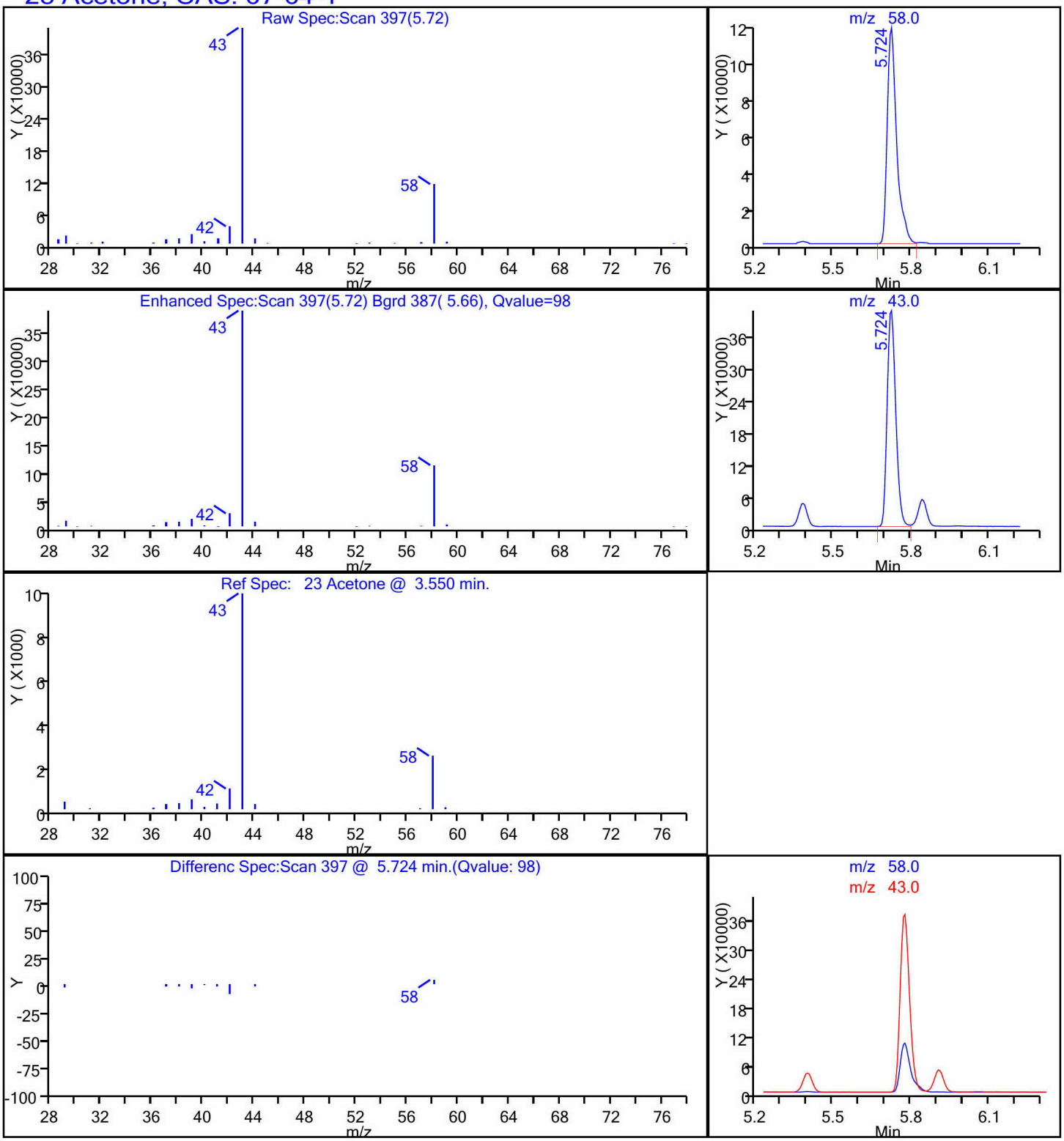
Report Date: 16-May-2014 07:08:34 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P106.D				
Injection Date:	15-May-2014 19:33:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-1	Lab Sample ID:	140-1353-1		
Client ID:	B2WM02				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

23 Acetone, CAS: 67-64-1



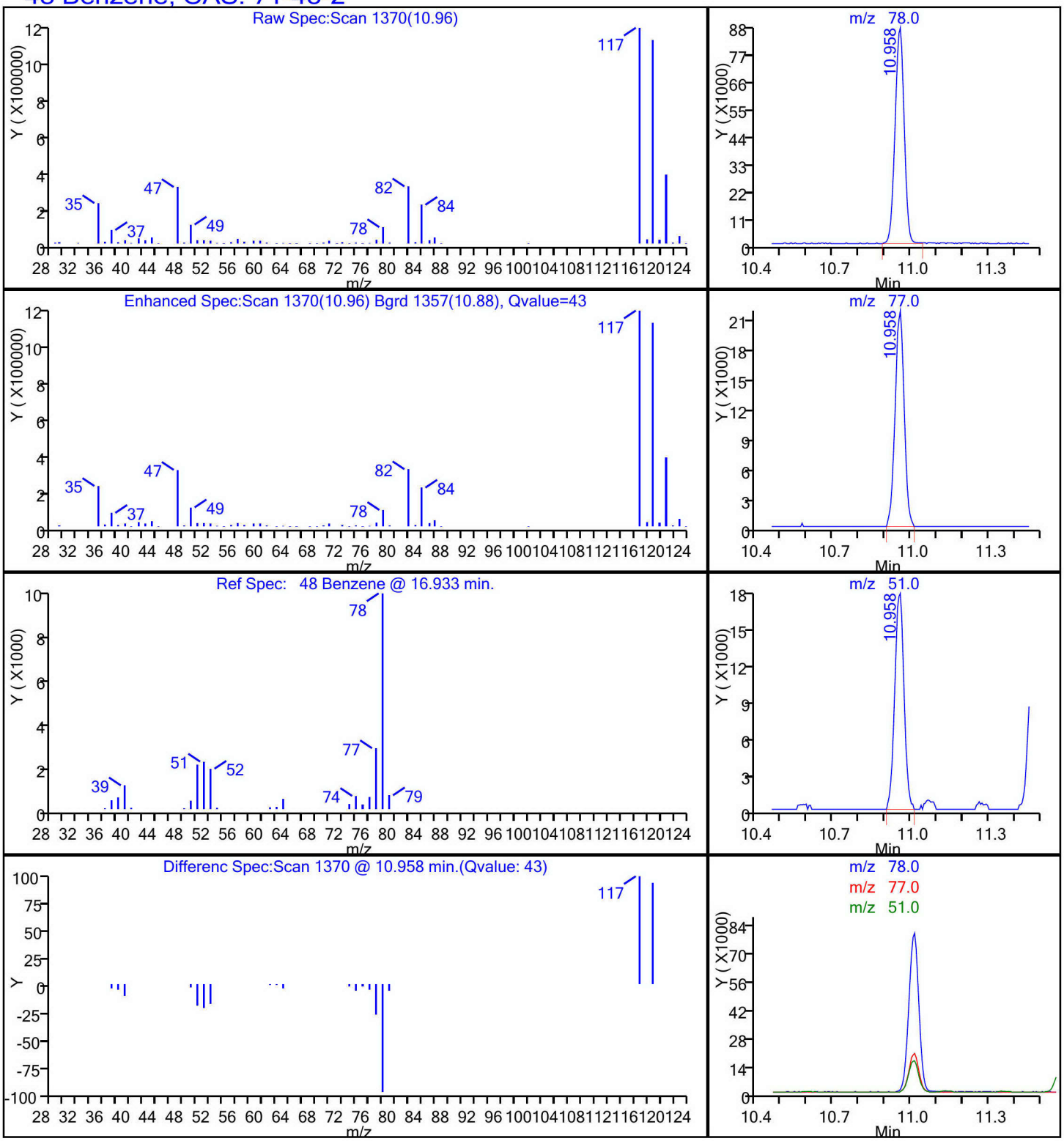
Report Date: 16-May-2014 07:08:34 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P106.D				
Injection Date:	15-May-2014 19:33:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-1	Lab Sample ID:	140-1353-1		
Client ID:	B2WM02				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

48 Benzene, CAS: 71-43-2



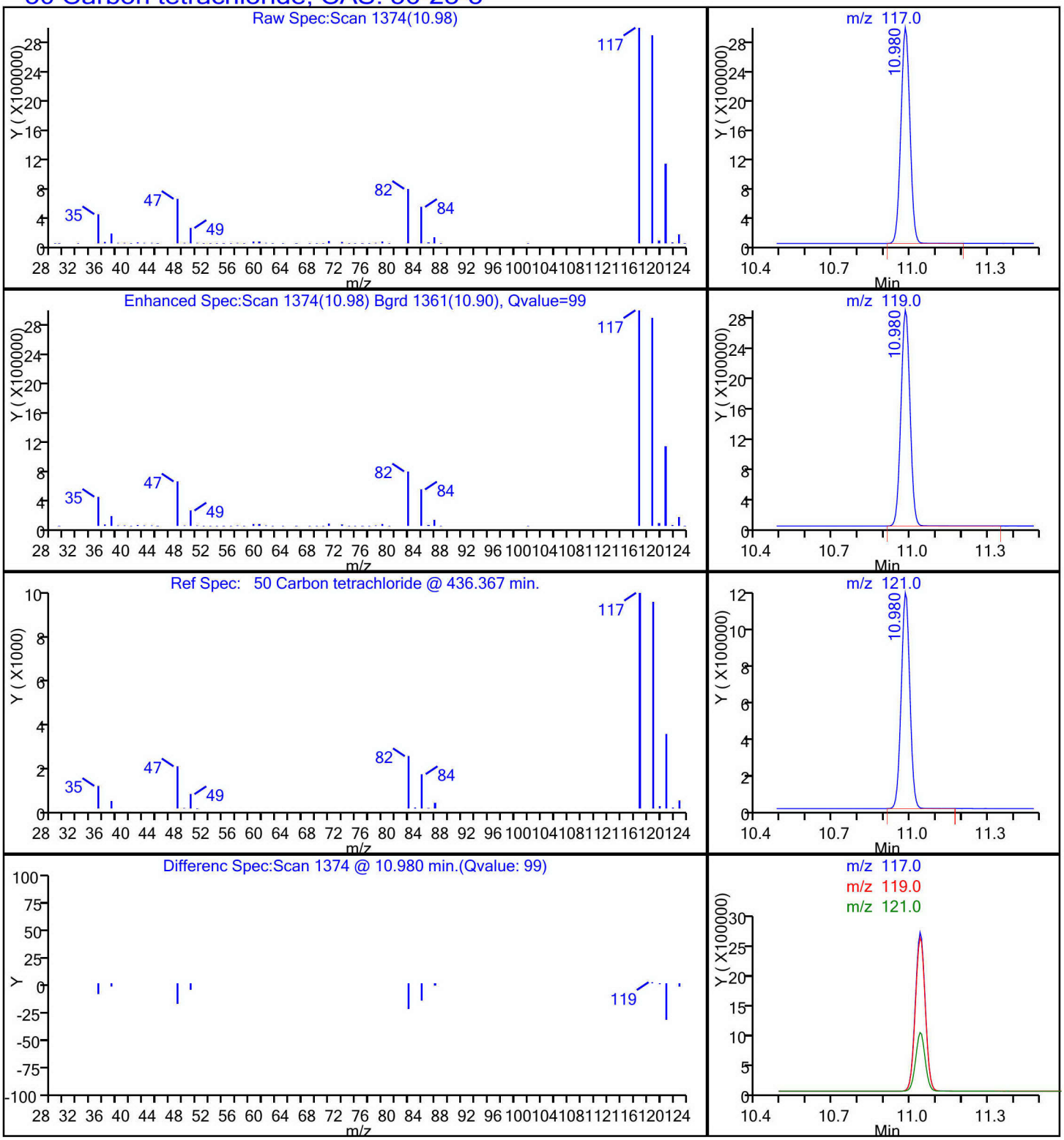
Report Date: 16-May-2014 07:08:34 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P106.D				
Injection Date:	15-May-2014 19:33:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-1	Lab Sample ID:	140-1353-1		
Client ID:	B2WM02				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

50 Carbon tetrachloride, CAS: 56-23-5



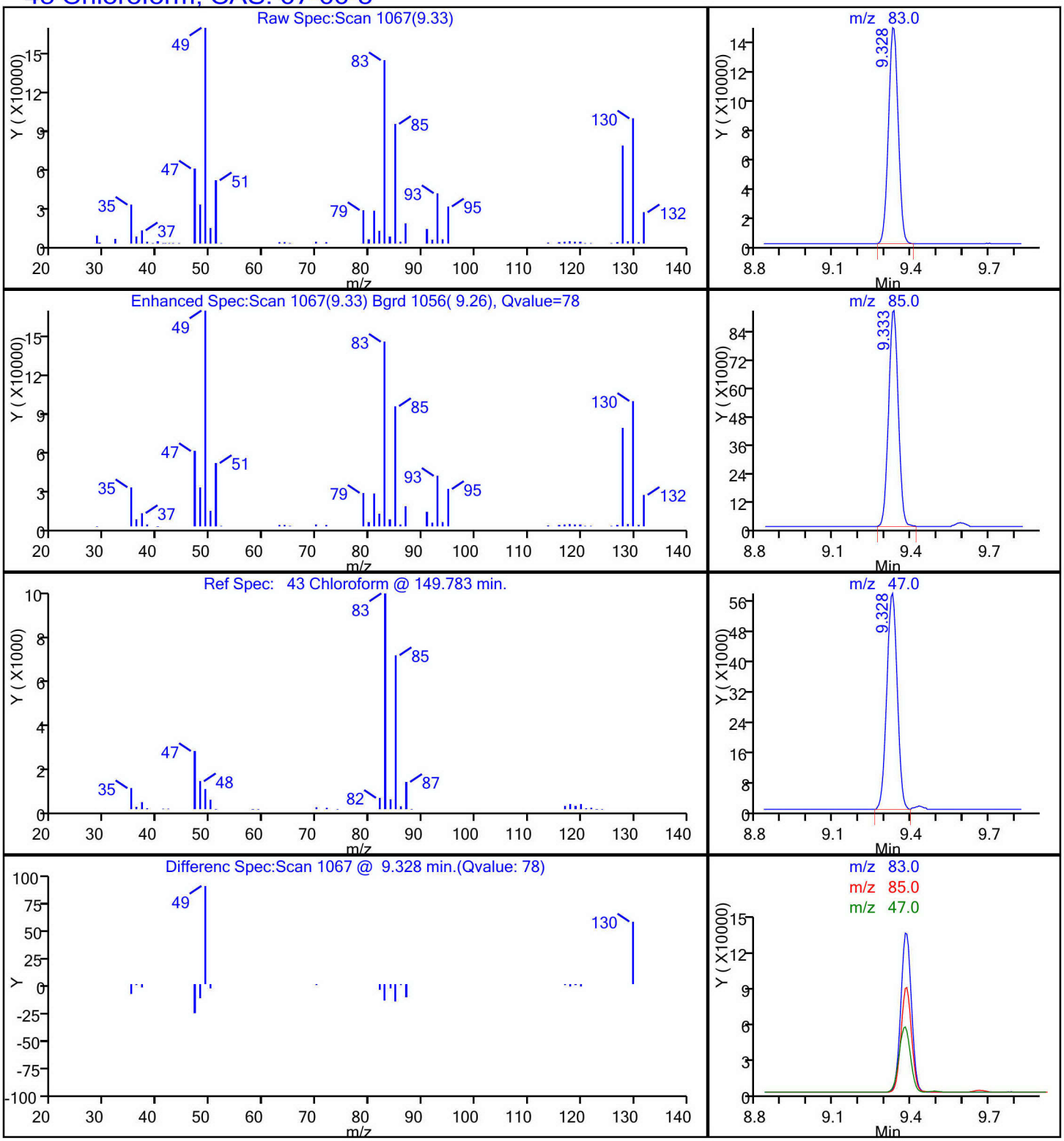
Report Date: 16-May-2014 07:08:34 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P106.D				
Injection Date:	15-May-2014 19:33:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-1	Lab Sample ID:	140-1353-1		
Client ID:	B2WM02				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

43 Chloroform, CAS: 67-66-3



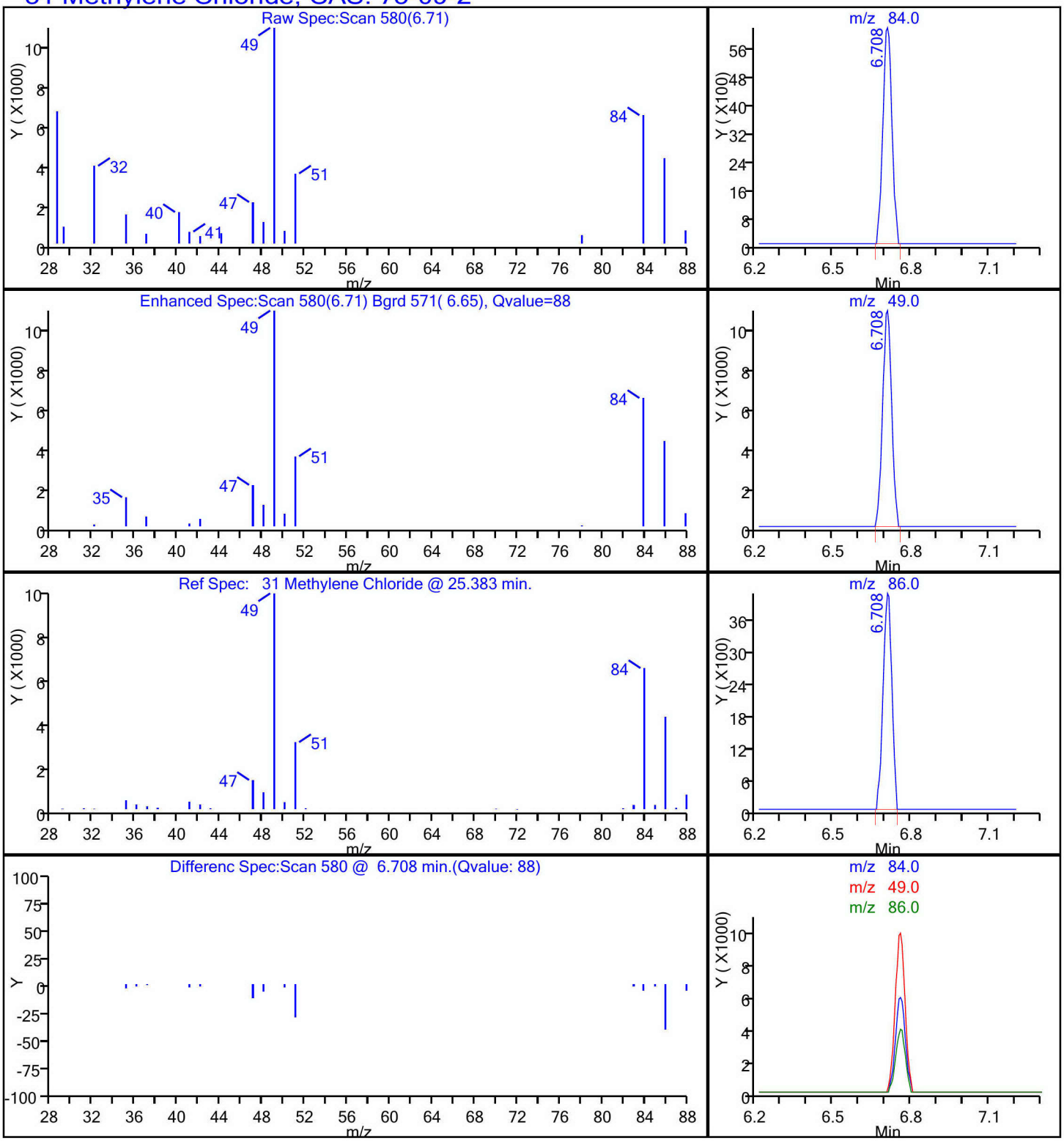
Report Date: 16-May-2014 07:08:34 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P106.D				
Injection Date:	15-May-2014 19:33:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-1	Lab Sample ID:	140-1353-1		
Client ID:	B2WM02				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2



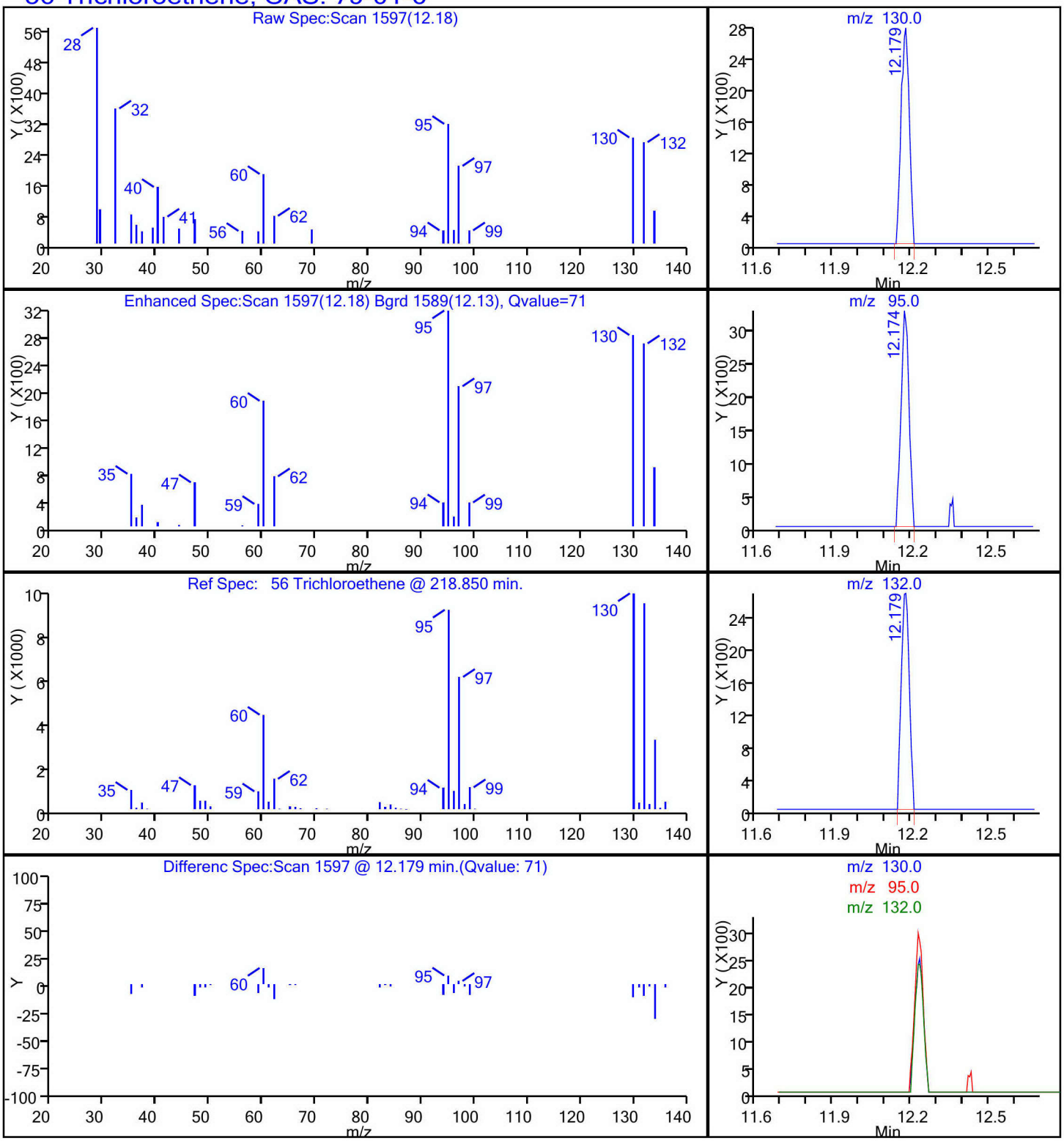
Report Date: 16-May-2014 07:08:34 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P106.D				
Injection Date:	15-May-2014 19:33:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-1	Lab Sample ID:	140-1353-1		
Client ID:	B2WM02				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

56 Trichloroethene, CAS: 79-01-6



FORM I

AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Client Sample ID: B2WM02 DL Lab Sample ID: 140-1353-1 DL

Matrix: Air Lab File ID: JE16P106.D

Analysis Method: TO 15 LL Date Collected: 05/13/2014 08:11

Sample wt/vol: 50(mL) Date Analyzed: 05/16/2014 12:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 1228 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.9	J	20	5.4
56-23-5	Carbon tetrachloride	39		0.80	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140515-684.b\JE16P106.D				
Lims ID:	140-1353-A-1	Lab Sample ID:	140-1353-1		
Client ID:	B2WM02				
Sample Type:	Client				
Inject. Date:	16-May-2014 12:21:30	ALS Bottle#:	6	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-1353-a-1				
Misc. Info.:	J051614,TO15,,140-0000684-008				
Operator ID:	7126	Instrument ID:	MJ		

Method:	\\KNXCHROM\ChromData\MJ\20140515-684.b\MJ_TO15.m		
Limit Group:	MSA TO14A_15 Routine ICAL		
Last Update:	19-May-2014 11:19:48	Calib Date:	11-Mar-2014 19:57:30
Integrator:	RTE	ID Type:	Deconvolution ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D		

Column 1 :	RTX-5 (0.32 mm)	Det: MS SCAN
Process Host:	XAWRK002	

First Level Reviewer: tajh Date: 19-May-2014 11:21:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.309	9.312	-0.003	97	217799	4.00	
* 2 1,4-Difluorobenzene	114	11.472	11.469	0.003	96	1098804	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.141	16.143	-0.002	90	918043	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.766	17.763	0.003	84	671853	4.14	
23 Acetone	58	5.737	5.729	0.008	97	18341	0.5924	
31 Methylene Chloride	84	6.711	6.708	0.003	71	3880	0.0666	
43 Chloroform	83	9.325	9.328	-0.003	71	33616	0.2649	
48 Benzene	78	10.955	10.952	0.003	88	18812	0.0998	
50 Carbon tetrachloride	117	10.977	10.979	-0.002	97	603581	3.88	

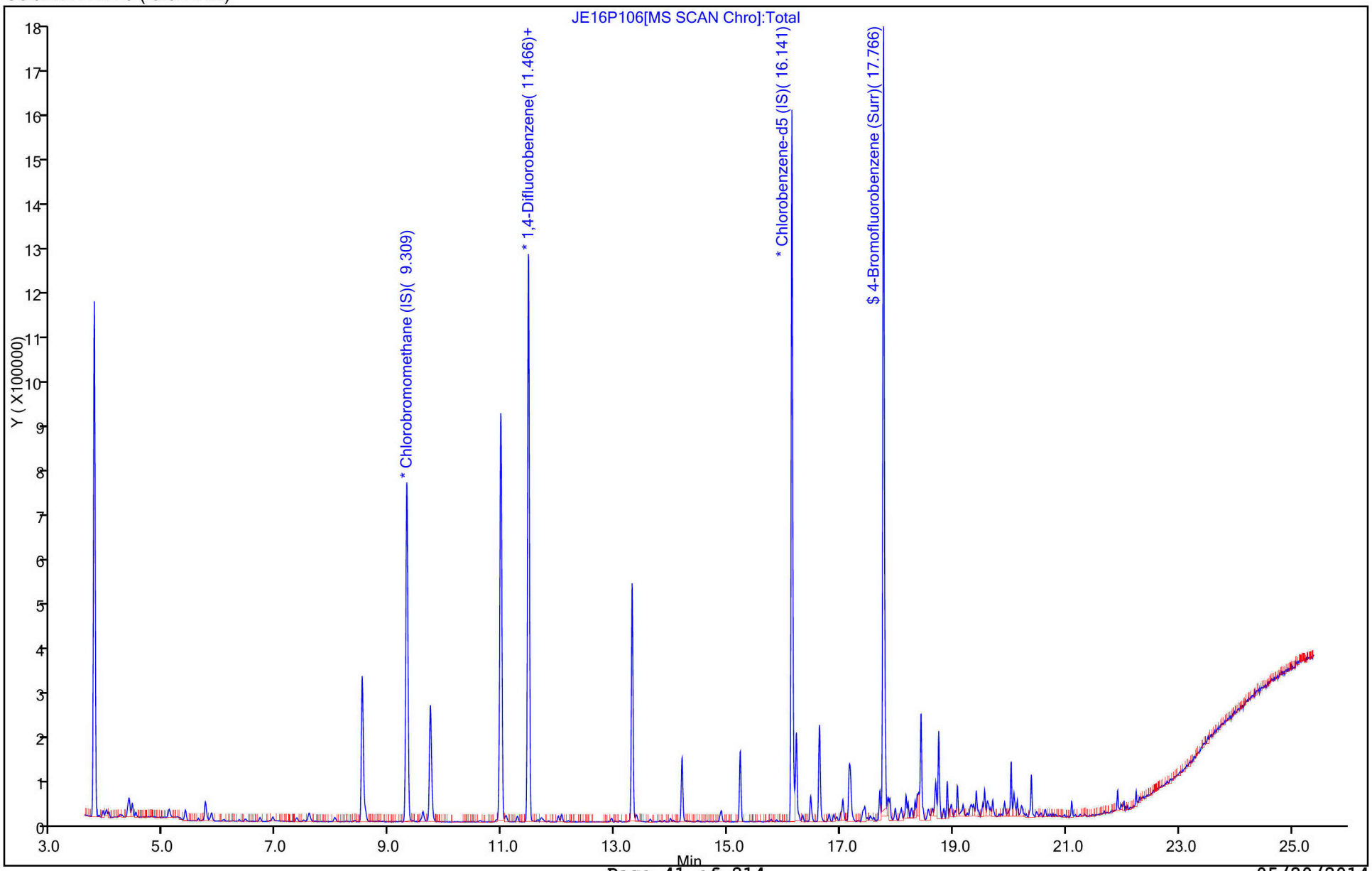
Report Date: 19-May-2014 11:21:11 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140515-684.b\JE16P106.D				
Injection Date:	16-May-2014 12:21:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-1353-A-1	Lab Sample ID:	140-1353-1	Worklist Smp#:	8
Client ID:	B2WM02				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



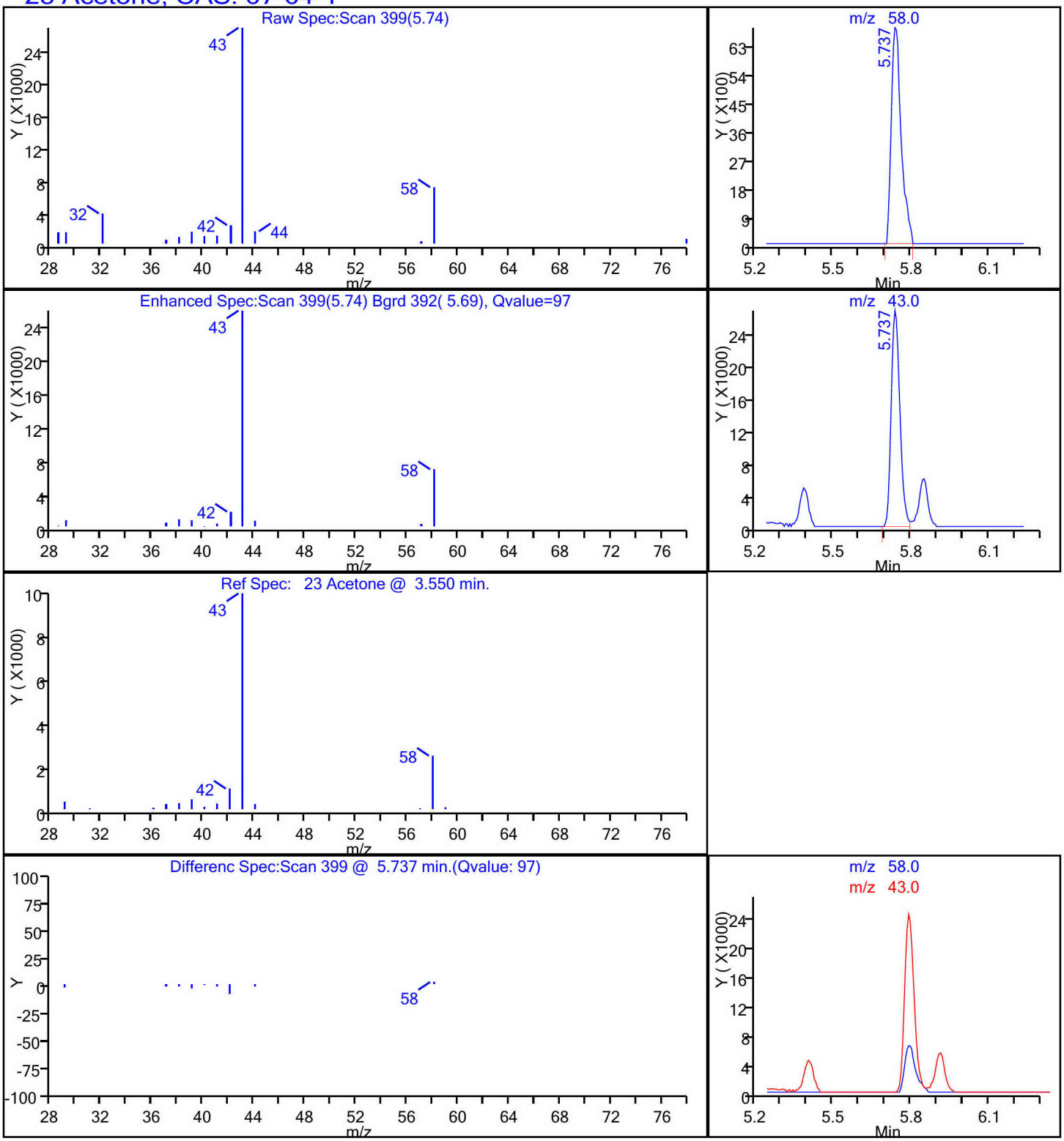
Report Date: 19-May-2014 11:21:11 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140515-684.b\JE16P106.D				
Injection Date:	16-May-2014 12:21:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-1	Lab Sample ID:	140-1353-1		
Client ID:	B2WM02				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

23 Acetone, CAS: 67-64-1



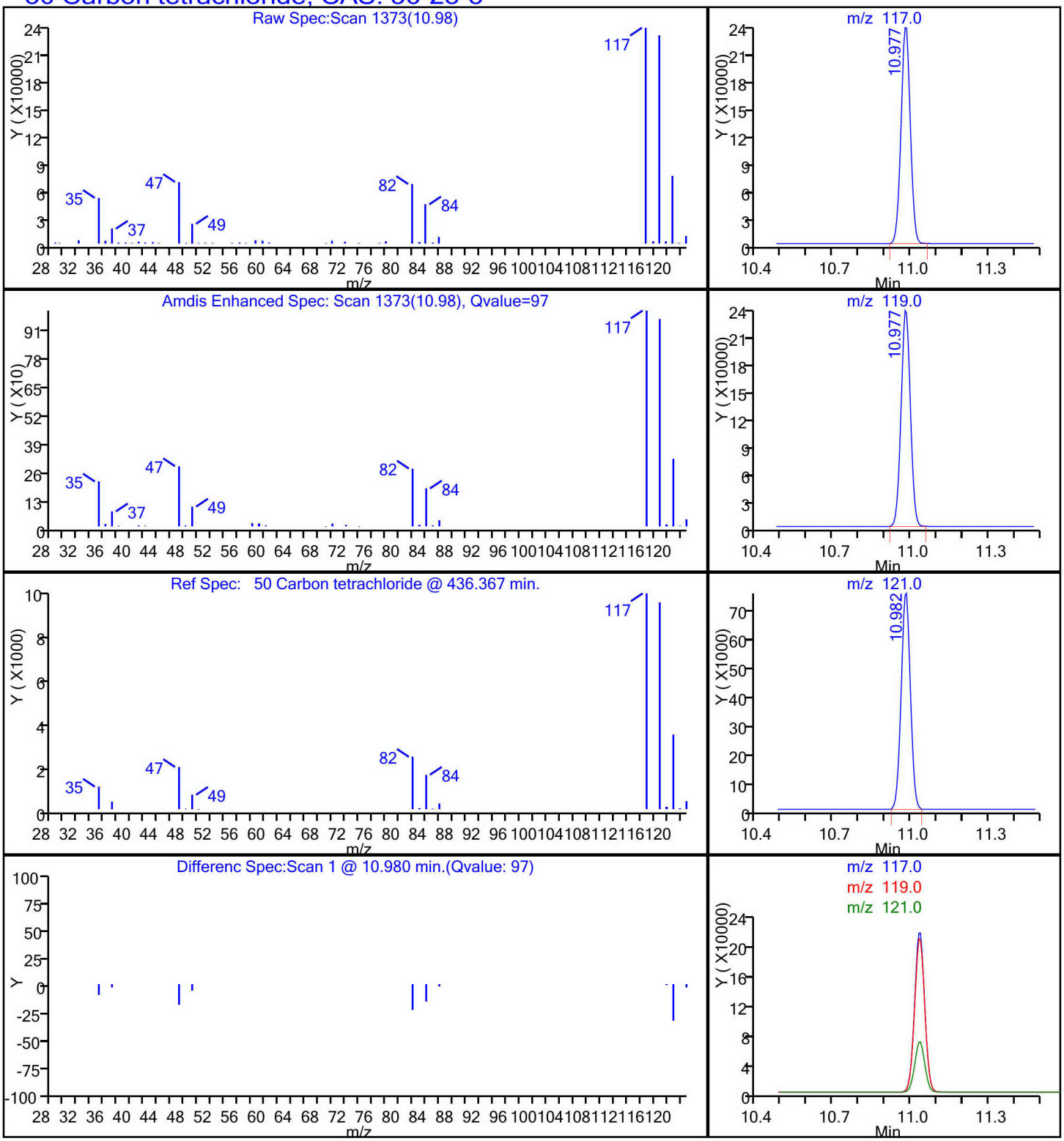
Report Date: 19-May-2014 11:21:11 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140515-684.b\JE16P106.D				
Injection Date:	16-May-2014 12:21:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-1	Lab Sample ID:	140-1353-1		
Client ID:	B2WM02				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

50 Carbon tetrachloride, CAS: 56-23-5



FORM I

AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1353-1

SDG No.: W06725

Client Sample ID: B2WM03 | Lab Sample ID: 140-1353-2

Matrix: Air | Lab File ID: JE15P107.D

Analysis Method: TO 15 LL | Date Collected: 05/13/2014 09:12

Sample wt/vol: 785(mL) | Date Analyzed: 05/15/2014 20:33

Soil Aliquot Vol: 785 (mL) | Dilution Factor: 1.57

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1222 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.080	0.012
75-35-4	1,1-Dichloroethene	ND		0.080	0.014
107-06-2	1,2-Dichloroethane	ND		0.080	0.019
67-64-1	Acetone	5.8		2.0	0.54
71-43-2	Benzene	3.2		0.080	0.023
56-23-5	*Carbon tetrachloride*	*39*	*E*	*0.080*	*0.015*
67-66-3	Chloroform	2.3		0.080	0.015
124-48-1	Dibromochloromethane	ND		0.080	0.017
75-09-2	Methylene Chloride	0.25		0.20	0.13
79-01-6	Trichloroethene	0.24		0.040	0.014
75-01-4	Vinyl chloride	ND		0.080	0.029

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P107.D				
Lims ID:	140-1353-A-2	Lab Sample ID:	140-1353-2		
Client ID:	B2WM03				
Sample Type:	Client				
Inject. Date:	15-May-2014 20:33:30	ALS Bottle#:	7	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.5700		
Sample Info:	140-1353-a-2@1.57				
Misc. Info.:	J051514,TO15,,140-0000681-013				
Operator ID:	7126	Instrument ID:	MJ		

Method:	\\KNXCHROM\ChromData\MJ\20140514-681.b\MJ_TO15.m		
Limit Group:	MSA TO14A_15 Routine ICAL		
Last Update:	19-May-2014 16:41:09	Calib Date:	11-Mar-2014 19:57:30
Integrator:	RTE	ID Type:	RT Order ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D		

Column 1 :	RTX-5 (0.32 mm)	Det: MS SCAN
Process Host:	XAWRK017	

First Level Reviewer: liul Date: 19-May-2014 16:41:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.314	9.318	-0.004	96	235573	4.00	
* 2 1,4-Difluorobenzene	114	11.471	11.475	-0.004	96	1064807	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.141	16.145	-0.004	89	859450	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.765	17.769	-0.004	82	630637	4.15	
23 Acetone	58	5.726	5.726	-0.004	76	195473	5.84	M
31 Methylene Chloride	84	6.710	6.709	0.001	87	15859	0.2516	
43 Chloroform	83	9.325	9.329	-0.004	74	311093	2.27	
48 Benzene	78	10.955	10.953	0.002	56	593072	3.25	
50 Carbon tetrachloride	117	10.982	10.980	0.002	99	5882261	39.0	E
56 Trichloroethene	130	12.176	12.180	-0.004	86	20914	0.2360	

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Review Flags
M - Manually Integrated

Report Date: 19-May-2014 16:41:10 Chrom Revision: 2.2 14-Apr-2014 13:40:08

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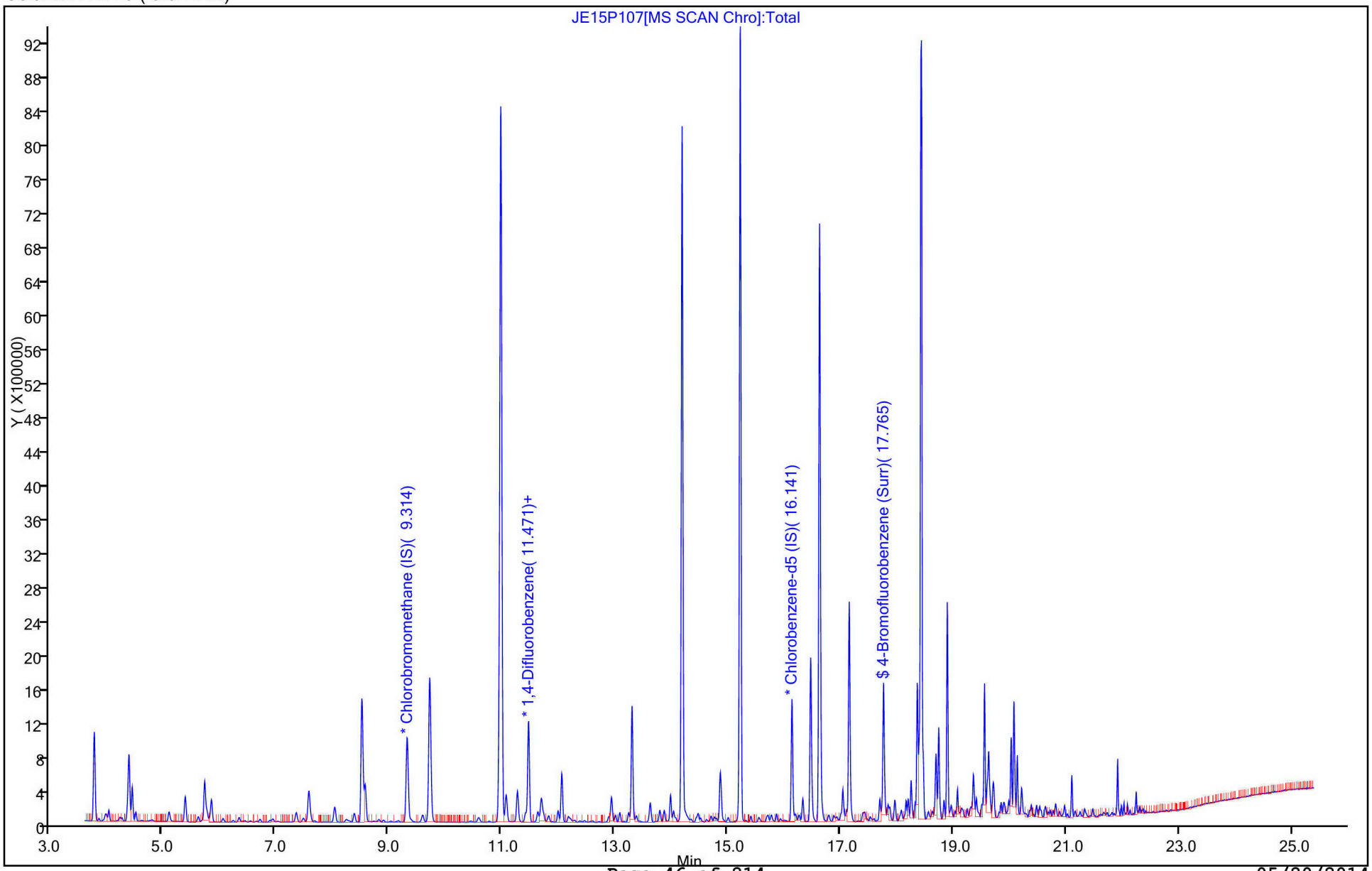
TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P107.D				
Injection Date:	15-May-2014 20:33:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-1353-A-2	Lab Sample ID:	140-1353-2	Worklist Smp#:	13
Client ID:	B2WM03				
Purge Vol:	500.000 mL	Dil. Factor:	1.5700	ALS Bottle#:	7
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



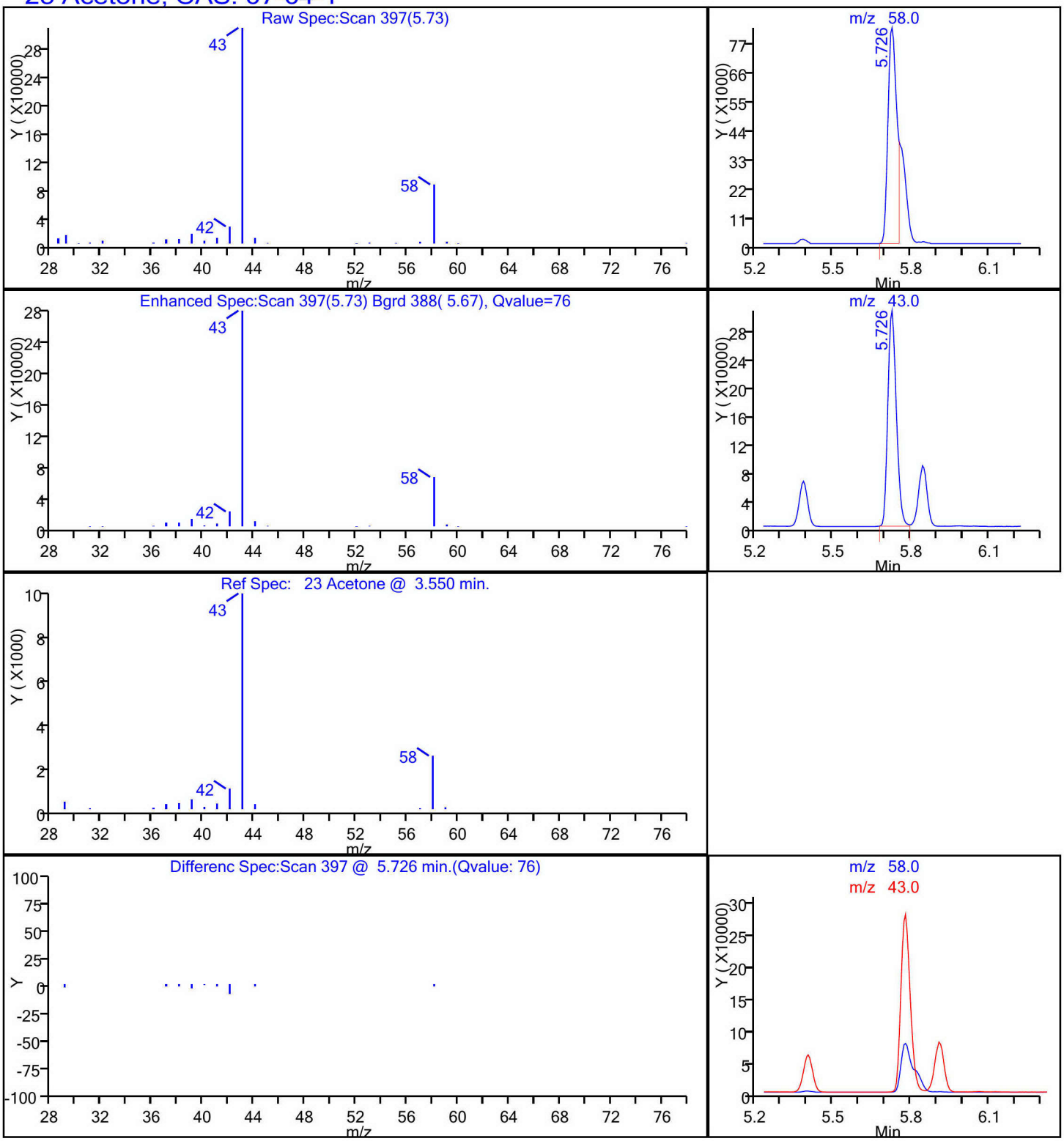
Report Date: 19-May-2014 16:41:10 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P107.D				
Injection Date:	15-May-2014 20:33:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-2	Lab Sample ID:	140-1353-2		
Client ID:	B2WM03				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.5700		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

23 Acetone, CAS: 67-64-1



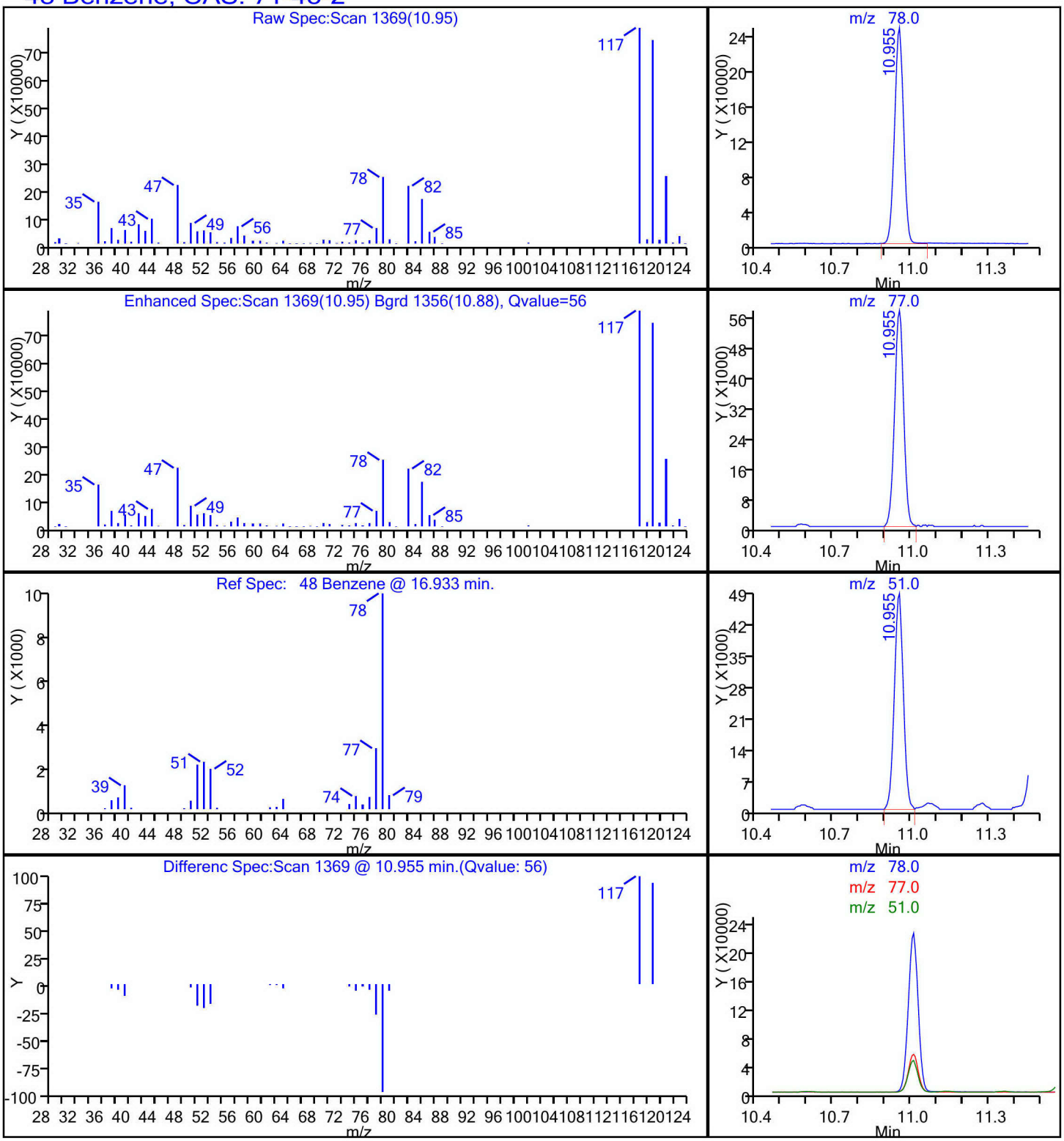
Report Date: 19-May-2014 16:41:10 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P107.D				
Injection Date:	15-May-2014 20:33:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-2	Lab Sample ID:	140-1353-2		
Client ID:	B2WM03				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.5700		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

48 Benzene, CAS: 71-43-2



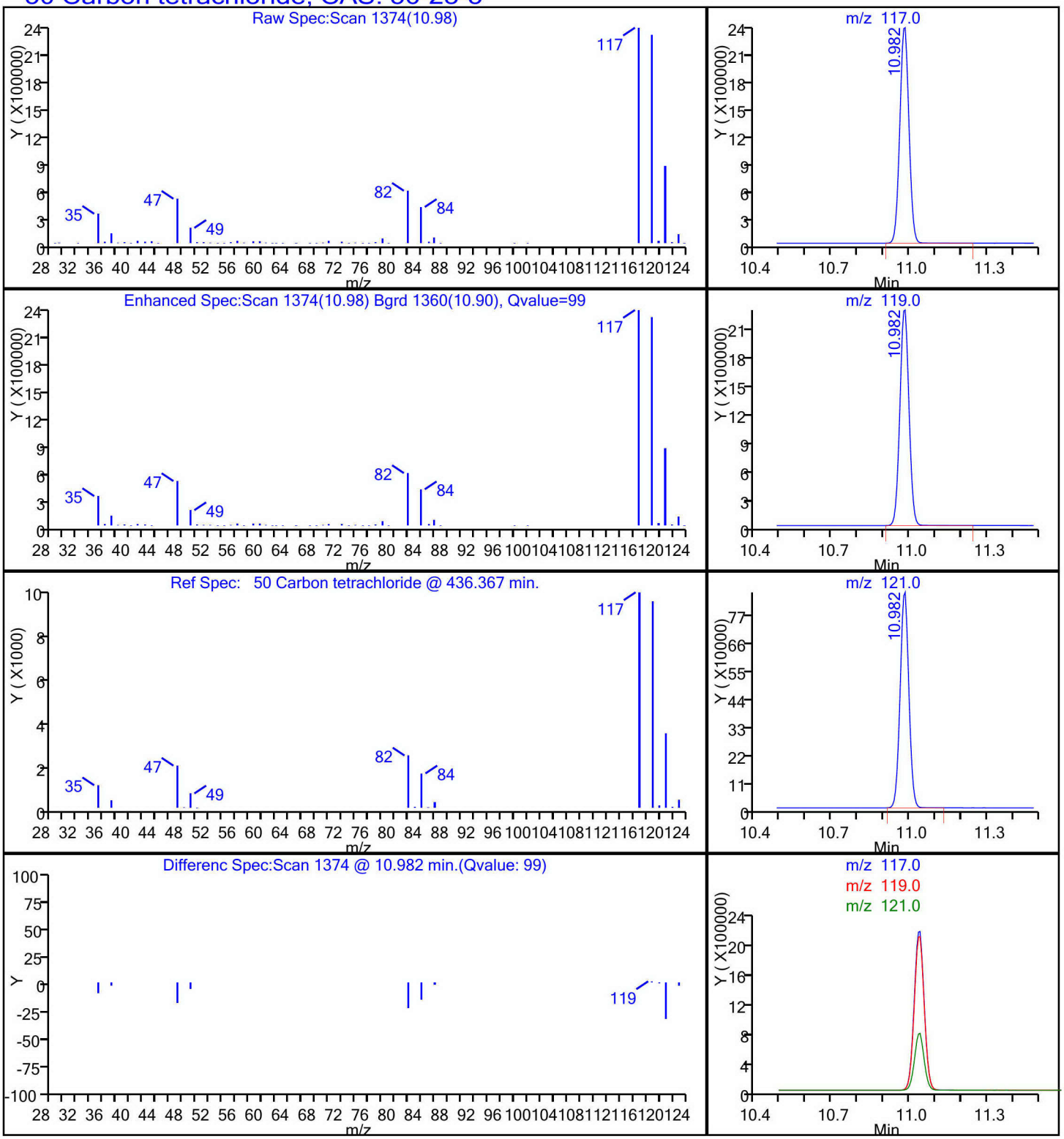
Report Date: 19-May-2014 16:41:10 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P107.D				
Injection Date:	15-May-2014 20:33:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-2	Lab Sample ID:	140-1353-2		
Client ID:	B2WM03				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.5700		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

50 Carbon tetrachloride, CAS: 56-23-5



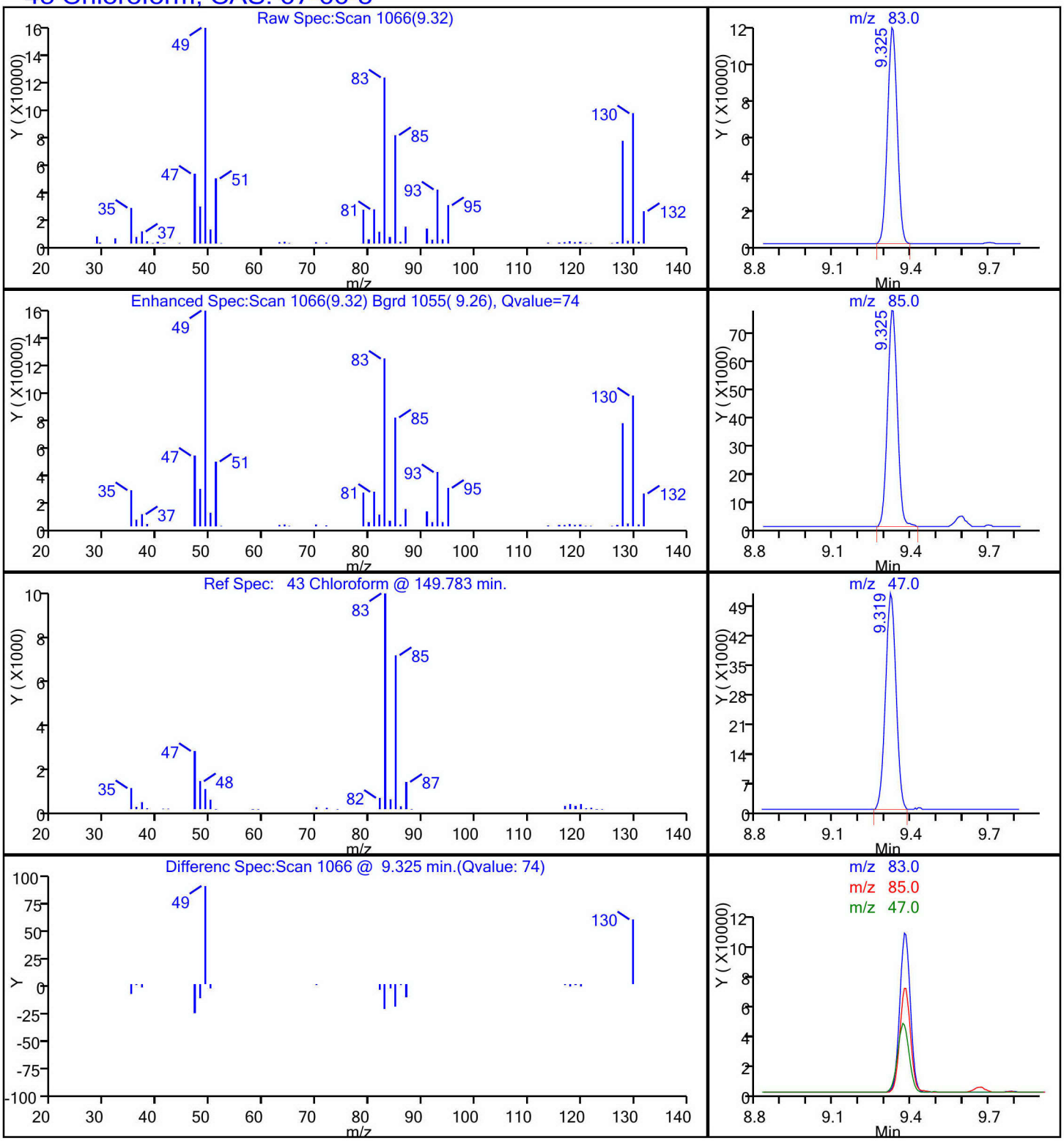
Report Date: 19-May-2014 16:41:10 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P107.D				
Injection Date:	15-May-2014 20:33:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-2	Lab Sample ID:	140-1353-2		
Client ID:	B2WM03				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.5700		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

43 Chloroform, CAS: 67-66-3



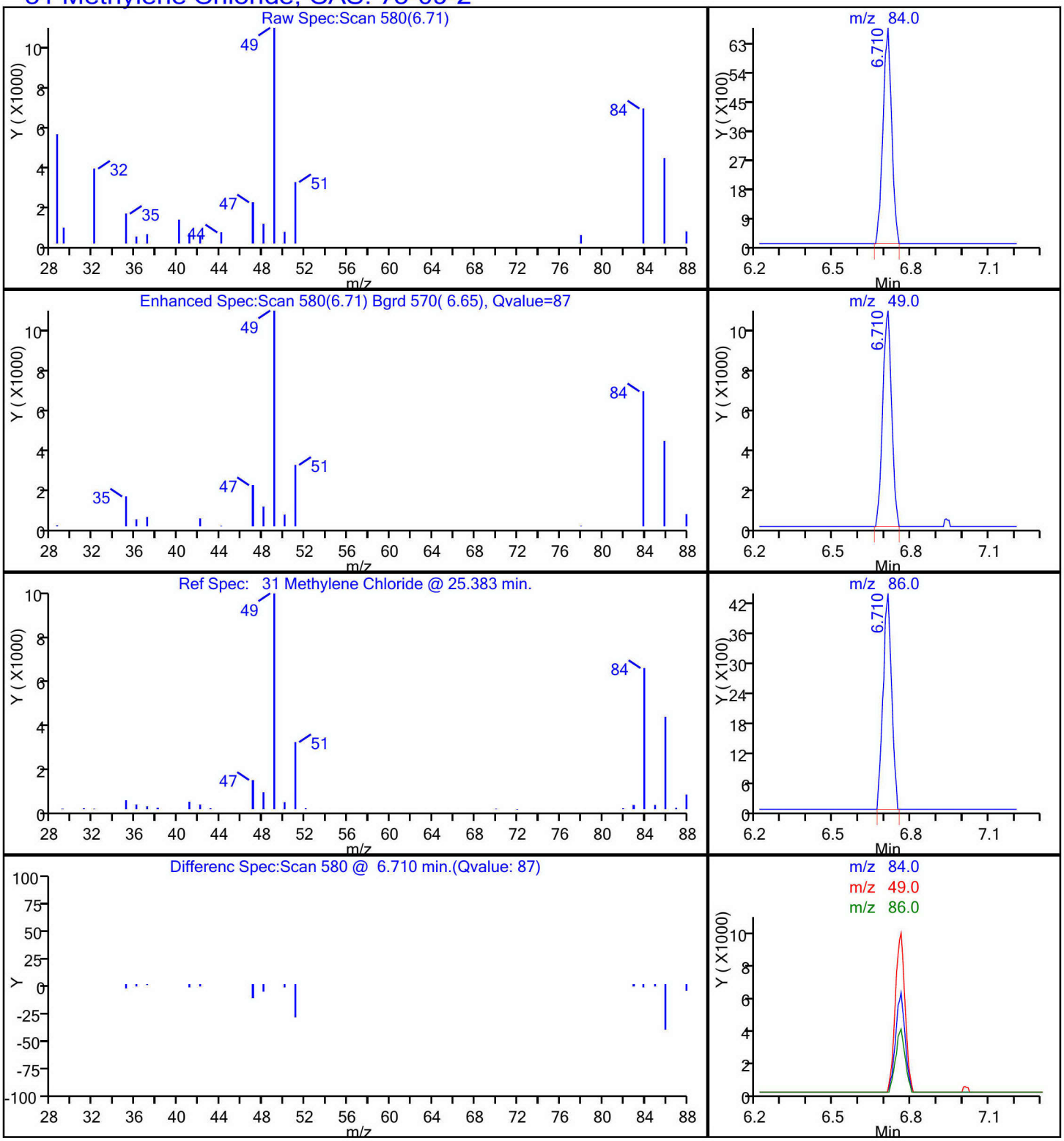
Report Date: 19-May-2014 16:41:10 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P107.D				
Injection Date:	15-May-2014 20:33:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-2	Lab Sample ID:	140-1353-2		
Client ID:	B2WM03				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.5700		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2



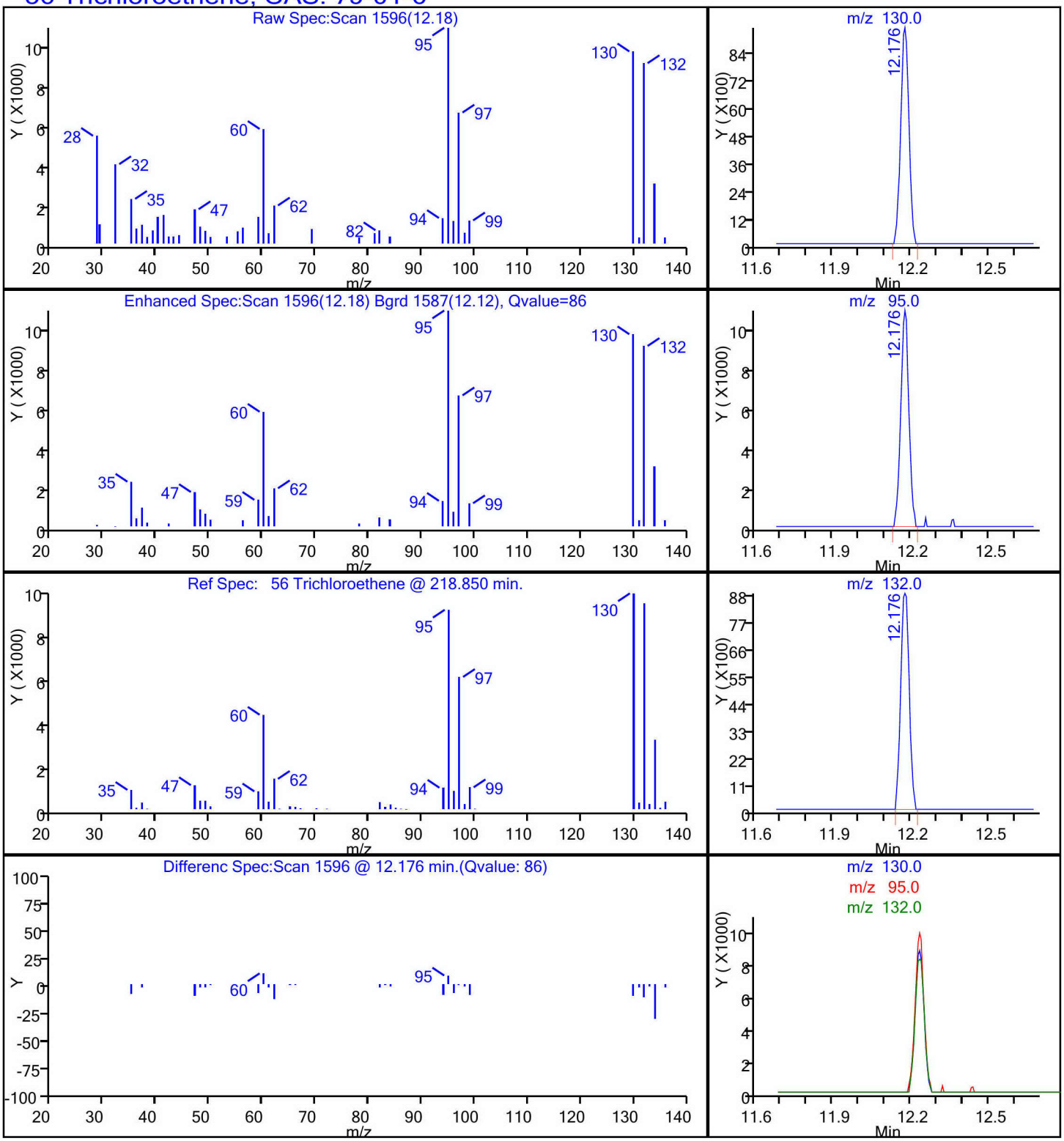
Report Date: 19-May-2014 16:41:10 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P107.D				
Injection Date:	15-May-2014 20:33:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-2	Lab Sample ID:	140-1353-2		
Client ID:	B2WM03				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.5700		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

56 Trichloroethene, CAS: 79-01-6



May 23, 2014

Manual Integration/User Assign Peak Report

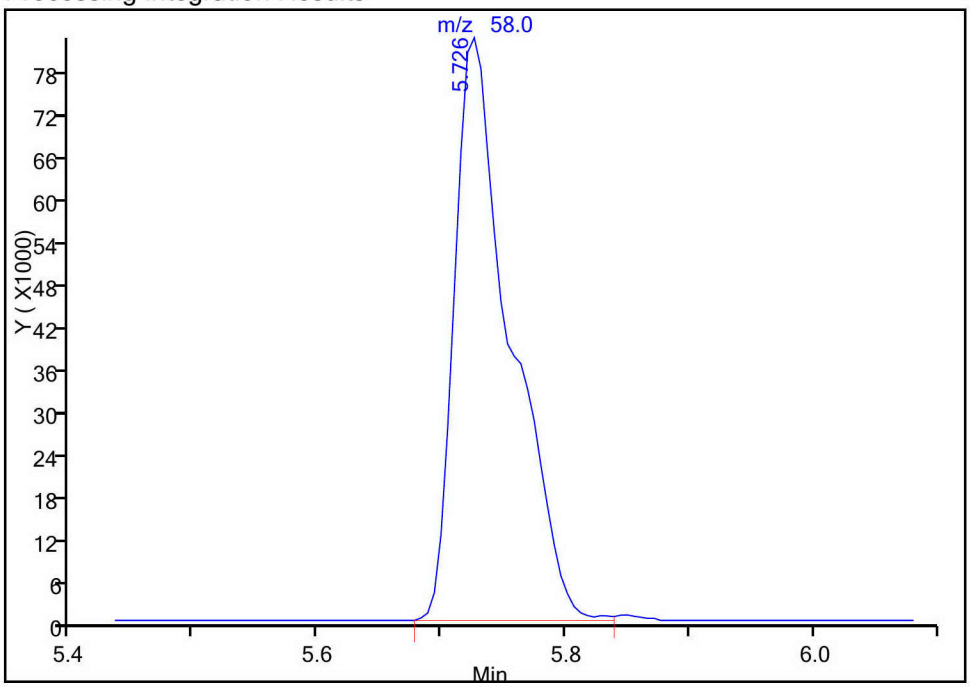
TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P107.D				
Injection Date:	15-May-2014 20:33:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-2	Lab Sample ID:	140-1353-2		
Client ID:	B2WM03				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.5700		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

23 Acetone, CAS: 67-64-1

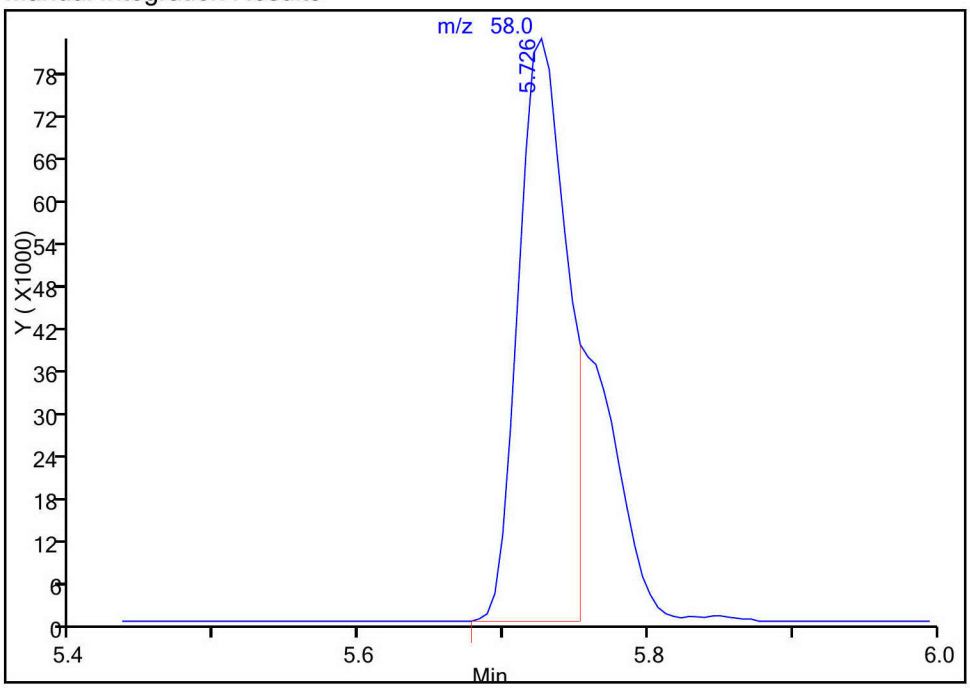
Processing Integration Results

RT: 5.73
Response: 260176
Amount: 7.769671



Manual Integration Results

RT: 5.73
Response: 195473
Amount: 5.837437



Reviewer: liul, 19-May-2014 16:41:09
Audit Action: Split an Integrated Peak
Audit Reason: Split Peak

FORM I

AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1353-1

SDG No.: W06725

Client Sample ID: B2WM03 DL | Lab Sample ID: 140-1353-2 DL

Matrix: Air | Lab File ID: JE16P107.D

Analysis Method: TO 15 LL | Date Collected: 05/13/2014 09:12

Sample wt/vol: 200(mL) | Date Analyzed: 05/16/2014 13:16

Soil Aliquot Vol: 200 (mL) | Dilution Factor: 1.57

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1228 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	33		0.31	0.059

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140515-684.b\JE16P107.D				
Lims ID:	140-1353-A-2	Lab Sample ID:	140-1353-2		
Client ID:	B2WM03				
Sample Type:	Client				
Inject. Date:	16-May-2014 13:16:30	ALS Bottle#:	7	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.5700		
Sample Info:	140-1353-a-2@1.57				
Misc. Info.:	J051614,TO15,,140-0000684-009				
Operator ID:	7126	Instrument ID:	MJ		

Method:	\\KNXCHROM\ChromData\MJ\20140515-684.b\MJ_TO15.m		
Limit Group:	MSA TO14A_15 Routine ICAL		
Last Update:	19-May-2014 11:19:48	Calib Date:	11-Mar-2014 19:57:30
Integrator:	RTE	ID Type:	Deconvolution ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D		

Column 1 :	RTX-5 (0.32 mm)	Det: MS SCAN
Process Host:	XAWRK002	

First Level Reviewer: tajh Date: 19-May-2014 11:21:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.309	9.312	-0.003	97	224136	4.00	
* 2 1,4-Difluorobenzene	114	11.472	11.469	0.003	96	1055696	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.141	16.143	-0.002	90	856424	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.766	17.763	0.003	84	627890	4.15	
23 Acetone	58	5.732	5.729	0.003	93	50551	1.59	
31 Methylene Chloride	84	6.711	6.708	0.003	81	5854	0.0976	
43 Chloroform	83	9.326	9.328	-0.002	86	71693	0.5489	
48 Benzene	78	10.955	10.952	0.003	97	125193	0.6912	
50 Carbon tetrachloride	117	10.977	10.979	-0.002	98	1260807	8.43	
56 Trichloroethene	130	12.177	12.173	0.004	65	4815	0.0548	

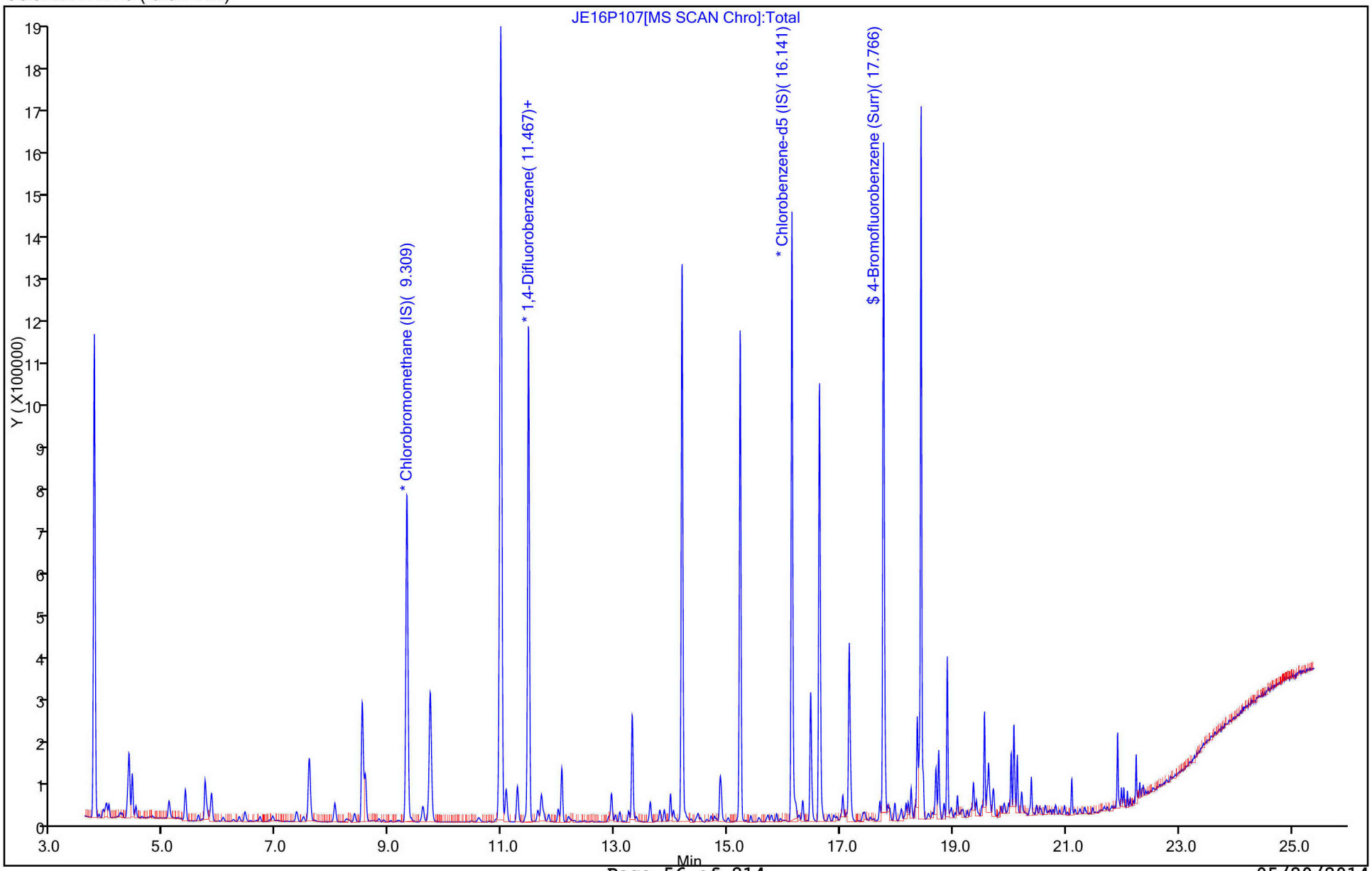
Report Date: 19-May-2014 11:21:16 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140515-684.b\JE16P107.D				
Injection Date:	16-May-2014 13:16:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-1353-A-2	Lab Sample ID:	140-1353-2	Worklist Smp#:	9
Client ID:	B2WM03				
Purge Vol:	500.000 mL	Dil. Factor:	1.5700	ALS Bottle#:	7
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



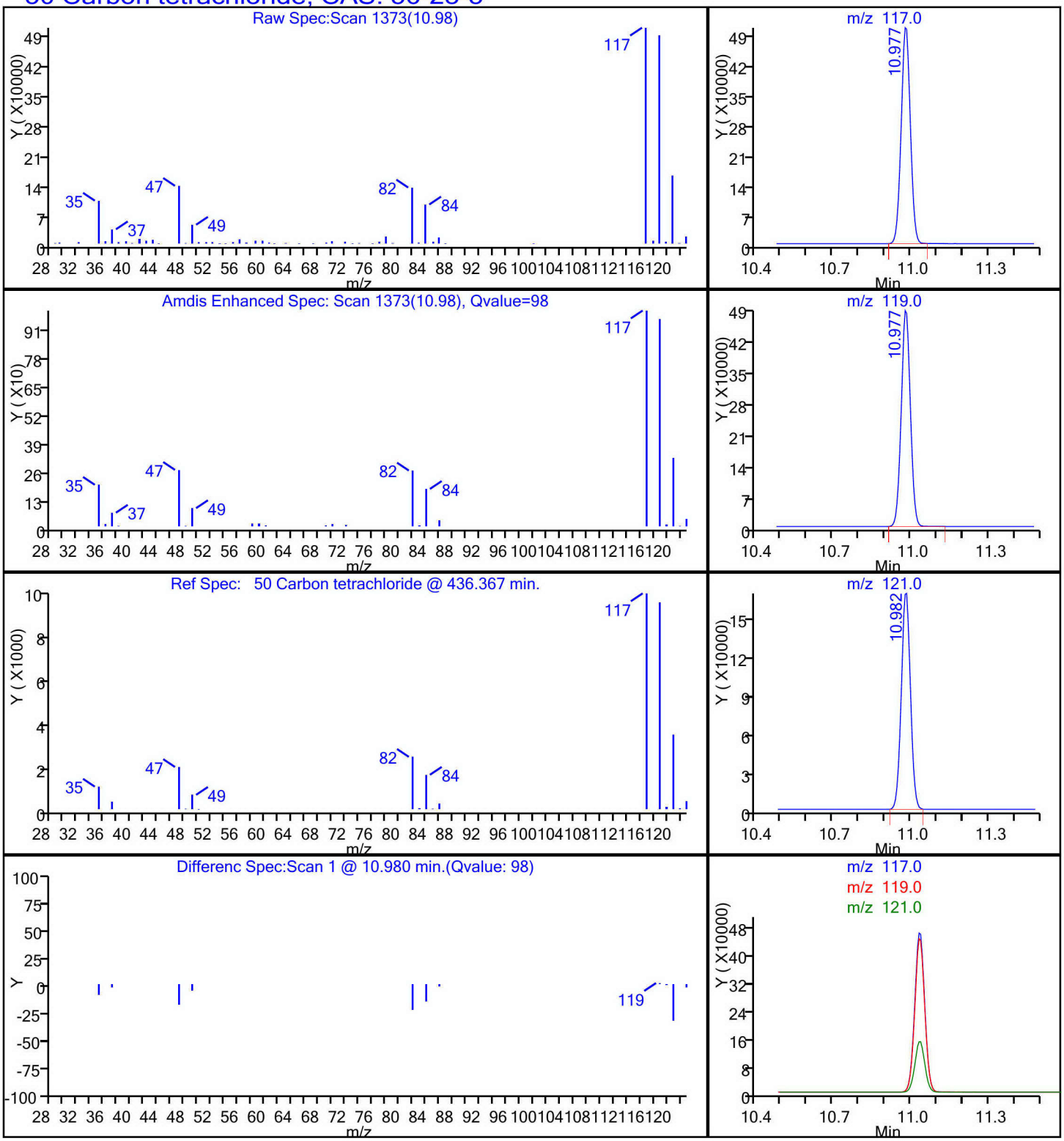
Report Date: 19-May-2014 11:21:16 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140515-684.b\JE16P107.D				
Injection Date:	16-May-2014 13:16:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-2	Lab Sample ID:	140-1353-2		
Client ID:	B2WM03				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.5700		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

50 Carbon tetrachloride, CAS: 56-23-5



FORM I

AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1353-1

SDG No.: W06725

Client Sample ID: B2WM04 | Lab Sample ID: 140-1353-3

Matrix: Air | Lab File ID: JE15P108.D

Analysis Method: TO 15 LL | Date Collected: 05/13/2014 10:13

Sample wt/vol: 735(mL) | Date Analyzed: 05/15/2014 21:32

Soil Aliquot Vol: | Dilution Factor: 1.47

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1222 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.080	0.012
75-35-4	1,1-Dichloroethene	ND		0.080	0.014
107-06-2	1,2-Dichloroethane	ND		0.080	0.019
67-64-1	Acetone	2.7	cn	2.0	0.54
71-43-2	Benzene	2.1		0.080	0.023
56-23-5	*Carbon tetrachloride*	*46*	*E*	*0.080*	*0.015*
67-66-3	Chloroform	2.5		0.080	0.015
124-48-1	Dibromochloromethane	ND		0.080	0.017
75-09-2	Methylene Chloride	0.27		0.20	0.13
79-01-6	Trichloroethene	0.16		0.040	0.014
75-01-4	Vinyl chloride	ND		0.080	0.029

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P108.D				
Lims ID:	140-1353-A-3	Lab Sample ID:	140-1353-3		
Client ID:	B2WM04				
Sample Type:	Client				
Inject. Date:	15-May-2014 21:32:30	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.4700		
Sample Info:	140-1353-a-3@1.47				
Misc. Info.:	J051514,TO15,,140-0000681-014				
Operator ID:	7126	Instrument ID:	MJ		

Method:	\\KNXCHROM\ChromData\MJ\20140514-681.b\MJ_TO15.m		
Limit Group:	MSA TO14A_15 Routine ICAL		
Last Update:	16-May-2014 07:07:46	Calib Date:	11-Mar-2014 19:57:30
Integrator:	RTE	ID Type:	RT Order ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D		

Column 1 :	RTX-5 (0.32 mm)	Det: MS SCAN
Process Host:	XAWRK003	

First Level Reviewer: tajh Date: 16-May-2014 06:25:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.312	9.318	-0.006	96	241348	4.00	
* 2 1,4-Difluorobenzene	114	11.469	11.475	-0.006	96	1106957	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.144	16.145	-0.001	89	904047	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.763	17.769	-0.006	82	653917	4.09	
23 Acetone	58	5.729	5.730	-0.001	74	93997	2.74	
31 Methylene Chloride	84	6.708	6.709	-0.001	92	17687	0.2739	
43 Chloroform	83	9.328	9.329	-0.001	86	354238	2.52	
48 Benzene	78	10.953	10.953	0.000	52	405855	2.14	
50 Carbon tetrachloride	117	10.979	10.980	-0.001	99	7165461	45.7	E
56 Trichloroethene	130	12.179	12.180	-0.001	82	14688	0.1594	

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

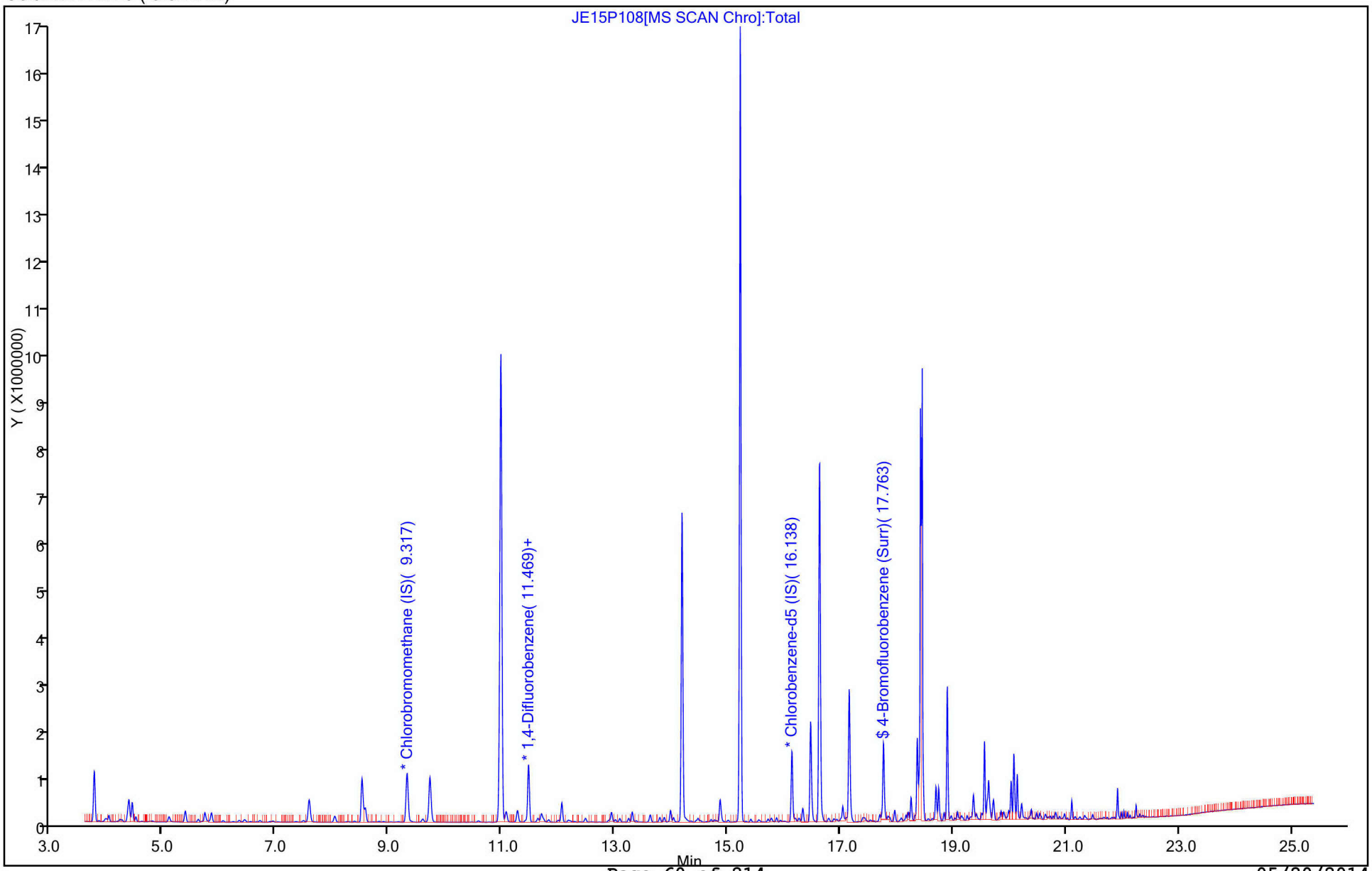
Report Date: 16-May-2014 07:08:38 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P108.D				
Injection Date:	15-May-2014 21:32:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-1353-A-3	Lab Sample ID:	140-1353-3	Worklist Smp#:	14
Client ID:	B2WM04				
Purge Vol:	500.000 mL	Dil. Factor:	1.4700	ALS Bottle#:	8
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



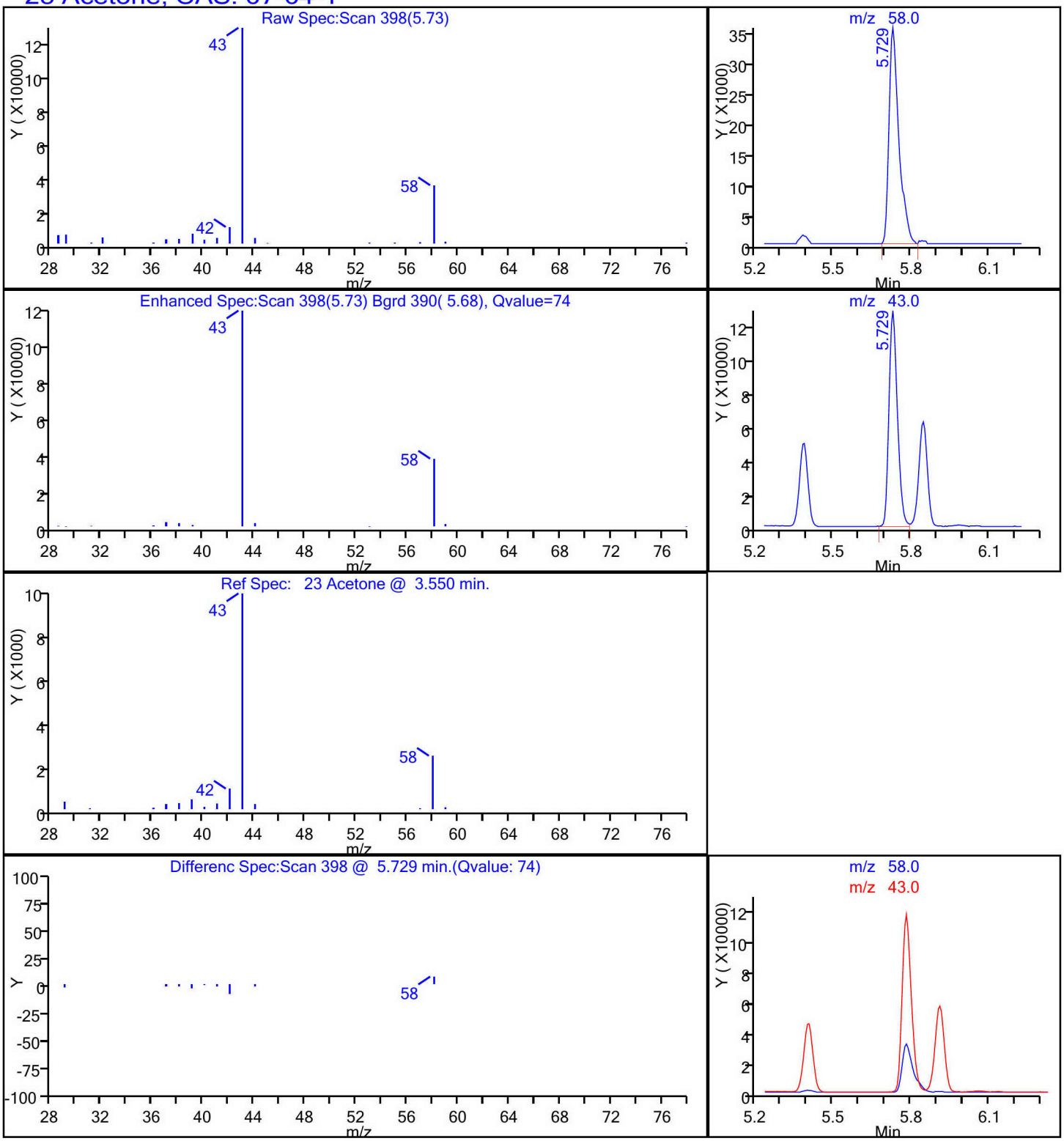
Report Date: 16-May-2014 07:08:38 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P108.D				
Injection Date:	15-May-2014 21:32:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-3	Lab Sample ID:	140-1353-3		
Client ID:	B2WM04				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.4700		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

23 Acetone, CAS: 67-64-1



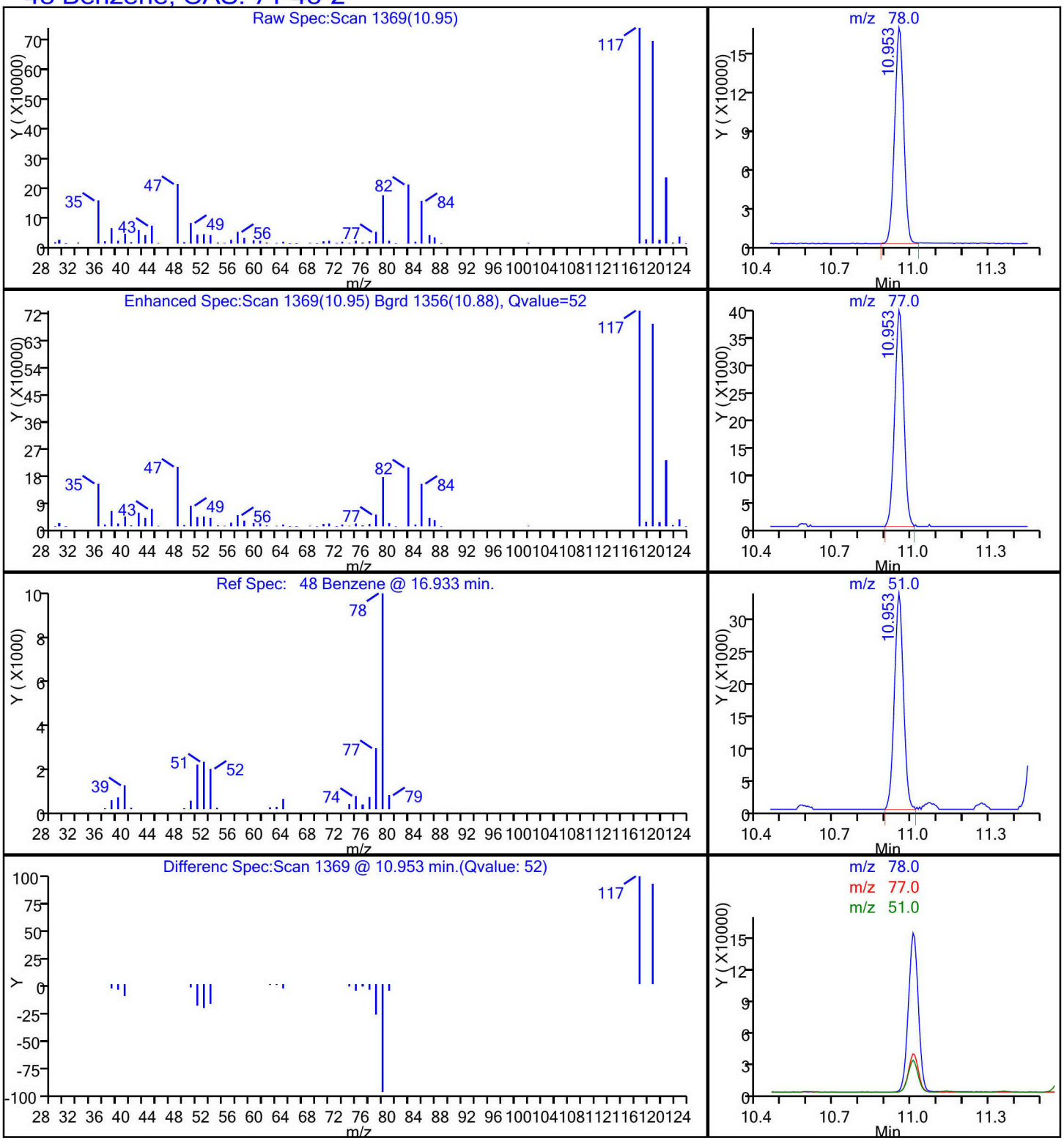
Report Date: 16-May-2014 07:08:39 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P108.D				
Injection Date:	15-May-2014 21:32:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-3	Lab Sample ID:	140-1353-3		
Client ID:	B2WM04				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.4700		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

48 Benzene, CAS: 71-43-2



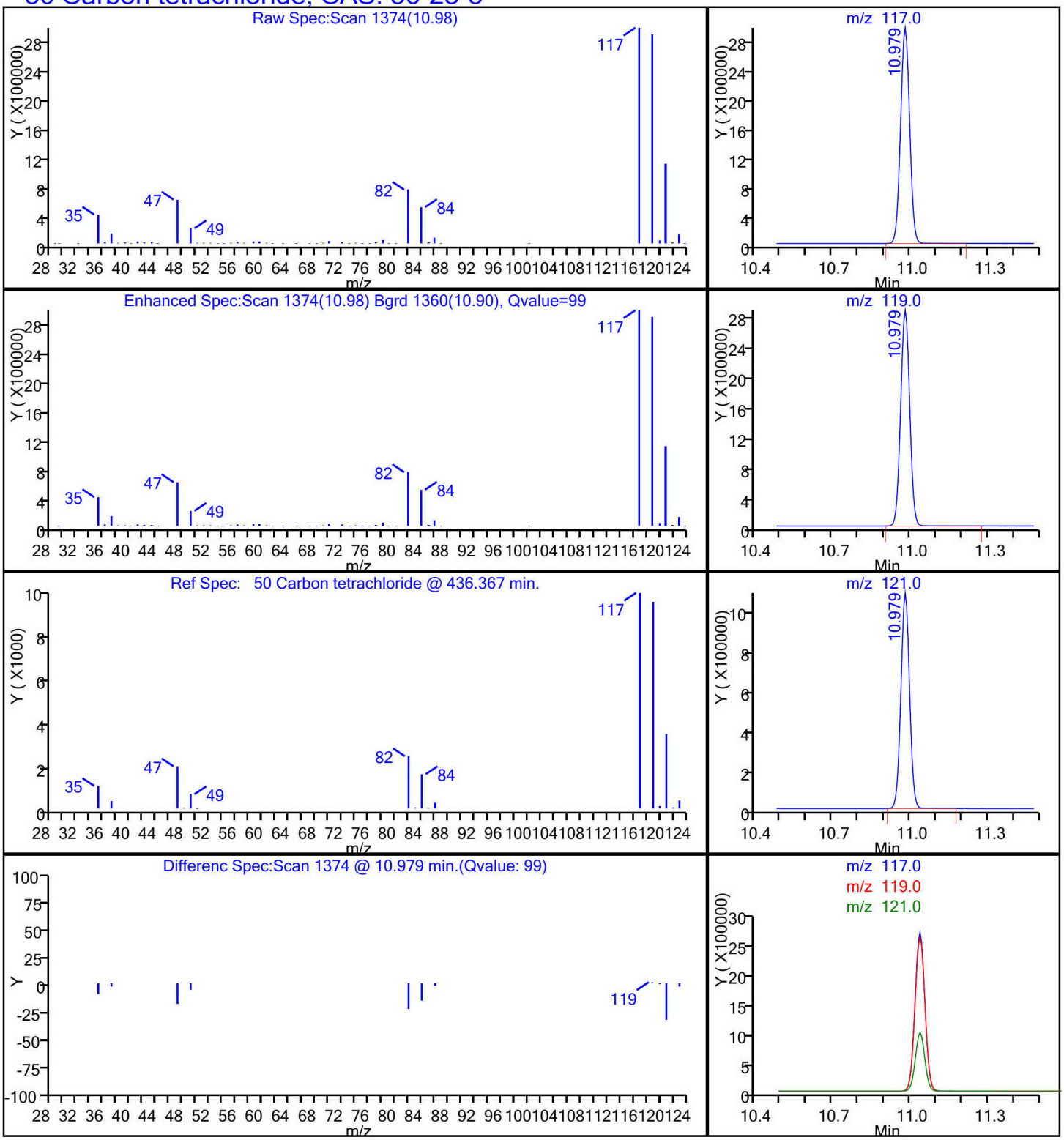
Report Date: 16-May-2014 07:08:39 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P108.D				
Injection Date:	15-May-2014 21:32:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-3	Lab Sample ID:	140-1353-3		
Client ID:	B2WM04				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.4700		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

50 Carbon tetrachloride, CAS: 56-23-5



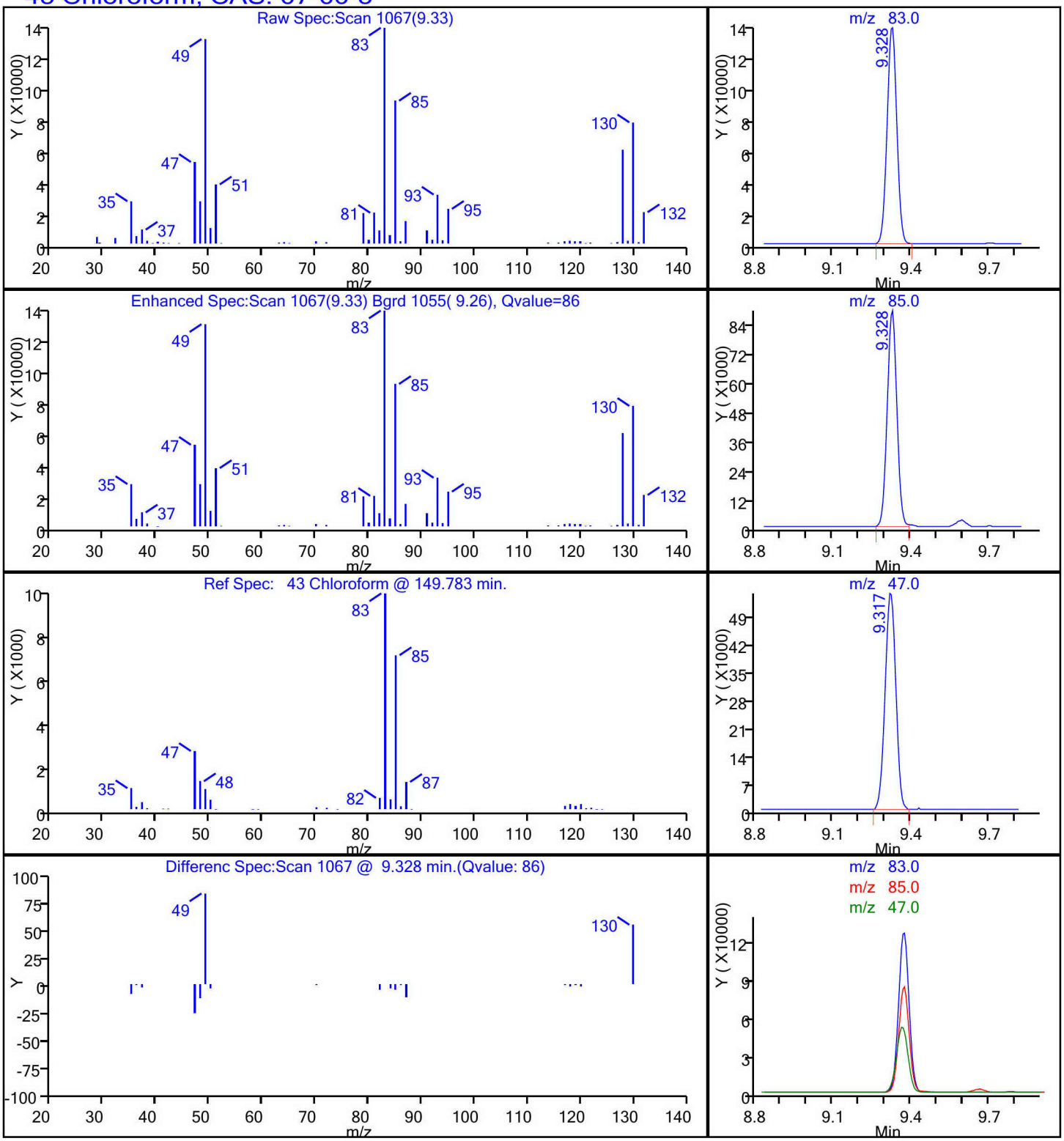
Report Date: 16-May-2014 07:08:39 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P108.D				
Injection Date:	15-May-2014 21:32:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-3	Lab Sample ID:	140-1353-3		
Client ID:	B2WM04				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.4700		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

43 Chloroform, CAS: 67-66-3



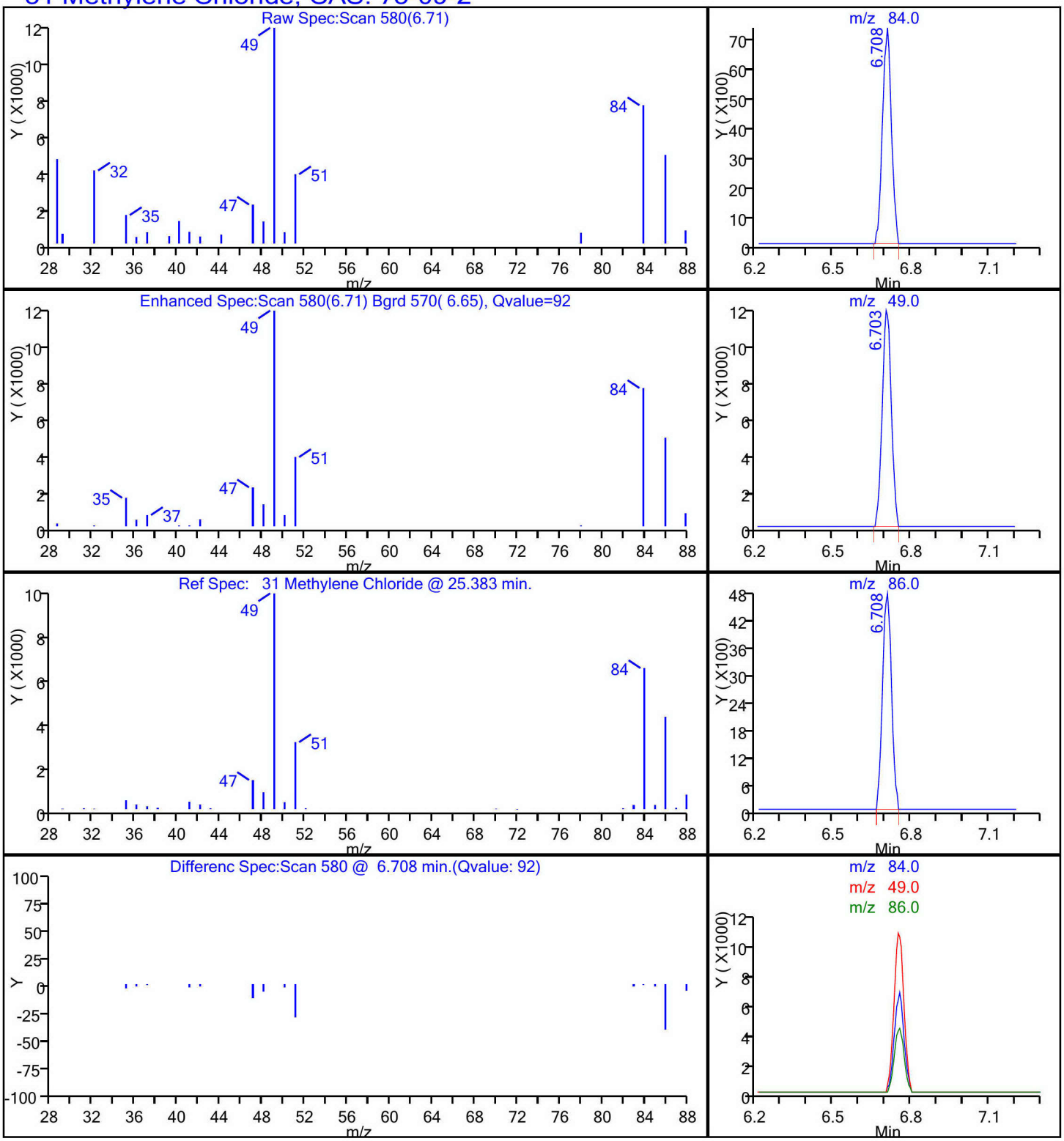
Report Date: 16-May-2014 07:08:39 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P108.D				
Injection Date:	15-May-2014 21:32:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-3	Lab Sample ID:	140-1353-3		
Client ID:	B2WM04				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.4700		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2



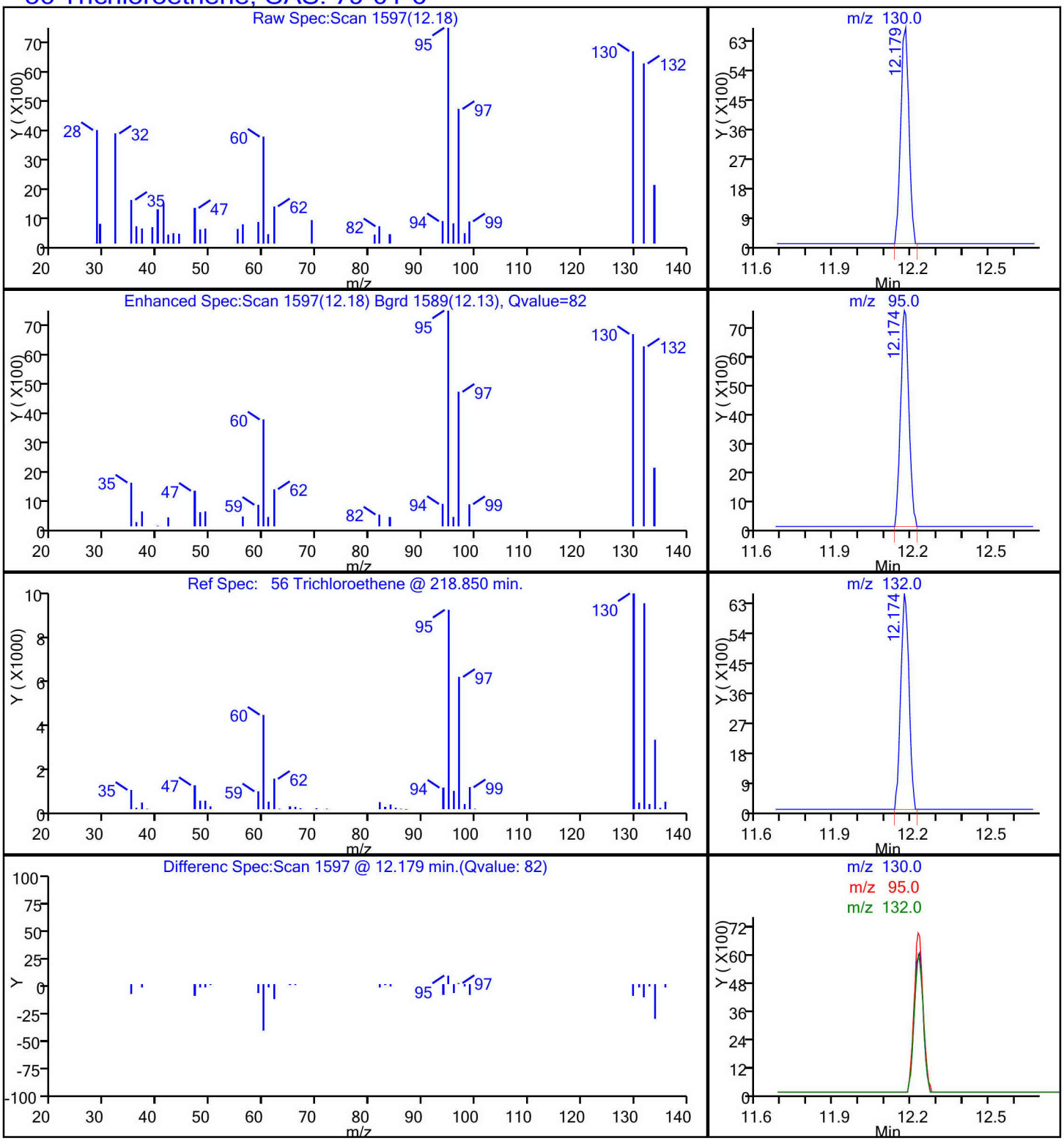
Report Date: 16-May-2014 07:08:39 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JE15P108.D				
Injection Date:	15-May-2014 21:32:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-3	Lab Sample ID:	140-1353-3		
Client ID:	B2WM04				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.4700		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

56 Trichloroethene, CAS: 79-01-6



FORM I

AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Client Sample ID: B2WM04 DL Lab Sample ID: 140-1353-3 DL

Matrix: Air Lab File ID: JE16P108.D

Analysis Method: TO 15 LL Date Collected: 05/13/2014 10:13

Sample wt/vol: 100(mL) Date Analyzed: 05/16/2014 14:11

Soil Aliquot Vol: Dilution Factor: 1.47

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 1228 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	41		0.59	0.11

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140515-684.b\JE16P108.D				
Lims ID:	140-1353-A-3	Lab Sample ID:	140-1353-3		
Client ID:	B2WM04				
Sample Type:	Client				
Inject. Date:	16-May-2014 14:11:30	ALS Bottle#:	8	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.4700		
Sample Info:	140-1353-a-3@1.47				
Misc. Info.:	J051614,TO15,,140-0000684-010				
Operator ID:	7126	Instrument ID:	MJ		

Method:	\\KNXCHROM\ChromData\MJ\20140515-684.b\MJ_TO15.m		
Limit Group:	MSA TO14A_15 Routine ICAL		
Last Update:	19-May-2014 11:19:48	Calib Date:	11-Mar-2014 19:57:30
Integrator:	RTE	ID Type:	Deconvolution ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D		

Column 1 :	RTX-5 (0.32 mm)	Det: MS SCAN
Process Host:	XAWRK002	

First Level Reviewer: tajh Date: 19-May-2014 11:21:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.308	9.312	-0.004	97	213027	4.00	
* 2 1,4-Difluorobenzene	114	11.471	11.469	0.002	96	983794	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.140	16.143	-0.003	90	780971	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.765	17.763	0.002	83	569530	4.12	
31 Methylene Chloride	84	6.704	6.708	-0.004	66	4102	0.0720	
43 Chloroform	83	9.324	9.328	-0.004	70	41972	0.3381	
48 Benzene	78	10.949	10.952	-0.003	95	39985	0.2369	
50 Carbon tetrachloride	117	10.981	10.979	0.002	97	777029	5.57	
56 Trichloroethene	130	12.175	12.173	0.002	25	1636	0.0200	

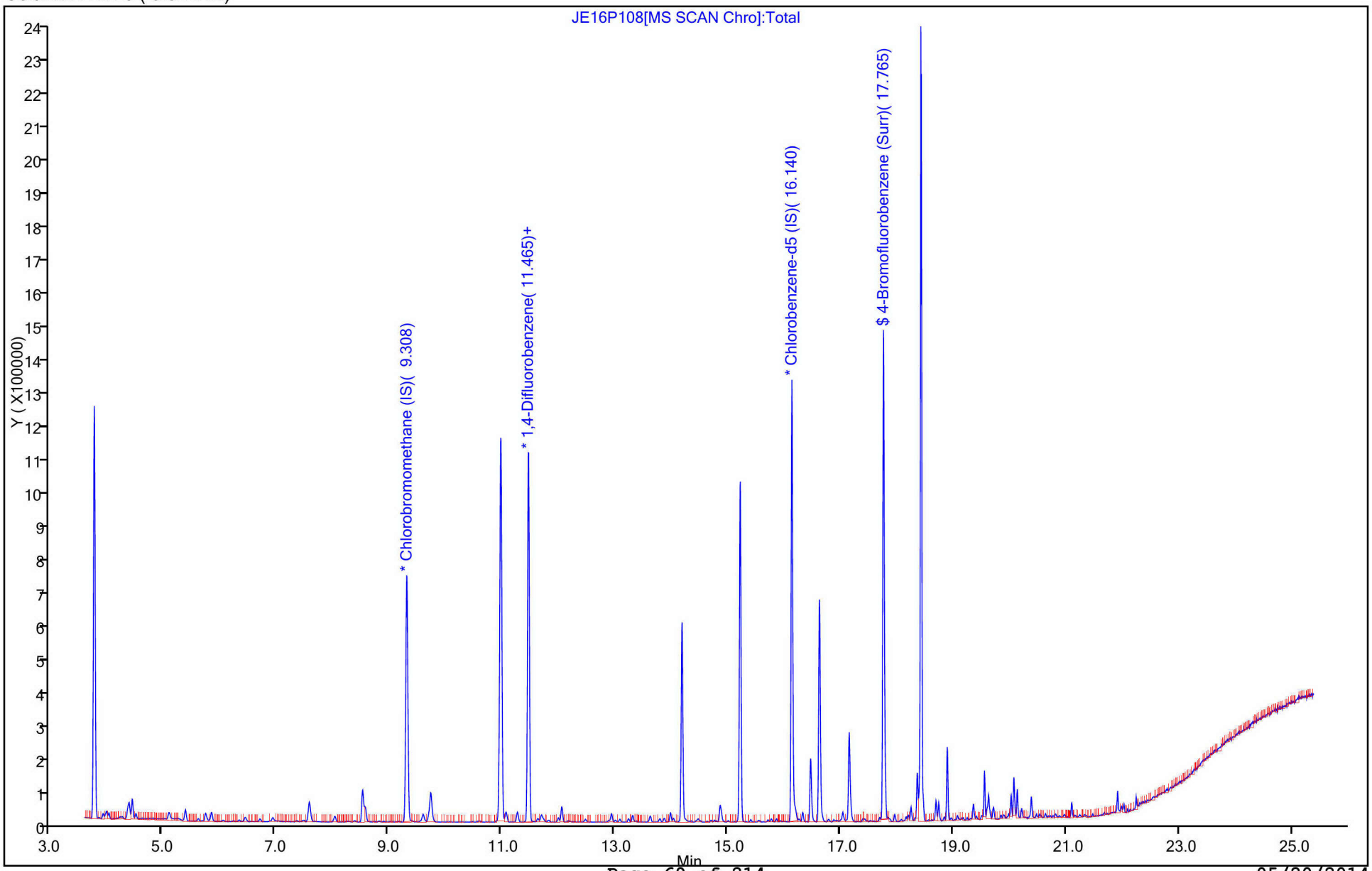
Report Date: 19-May-2014 11:21:20 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140515-684.b\JE16P108.D				
Injection Date:	16-May-2014 14:11:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-1353-A-3	Lab Sample ID:	140-1353-3	Worklist Smp#:	10
Client ID:	B2WM04				
Purge Vol:	500.000 mL	Dil. Factor:	1.4700	ALS Bottle#:	8
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



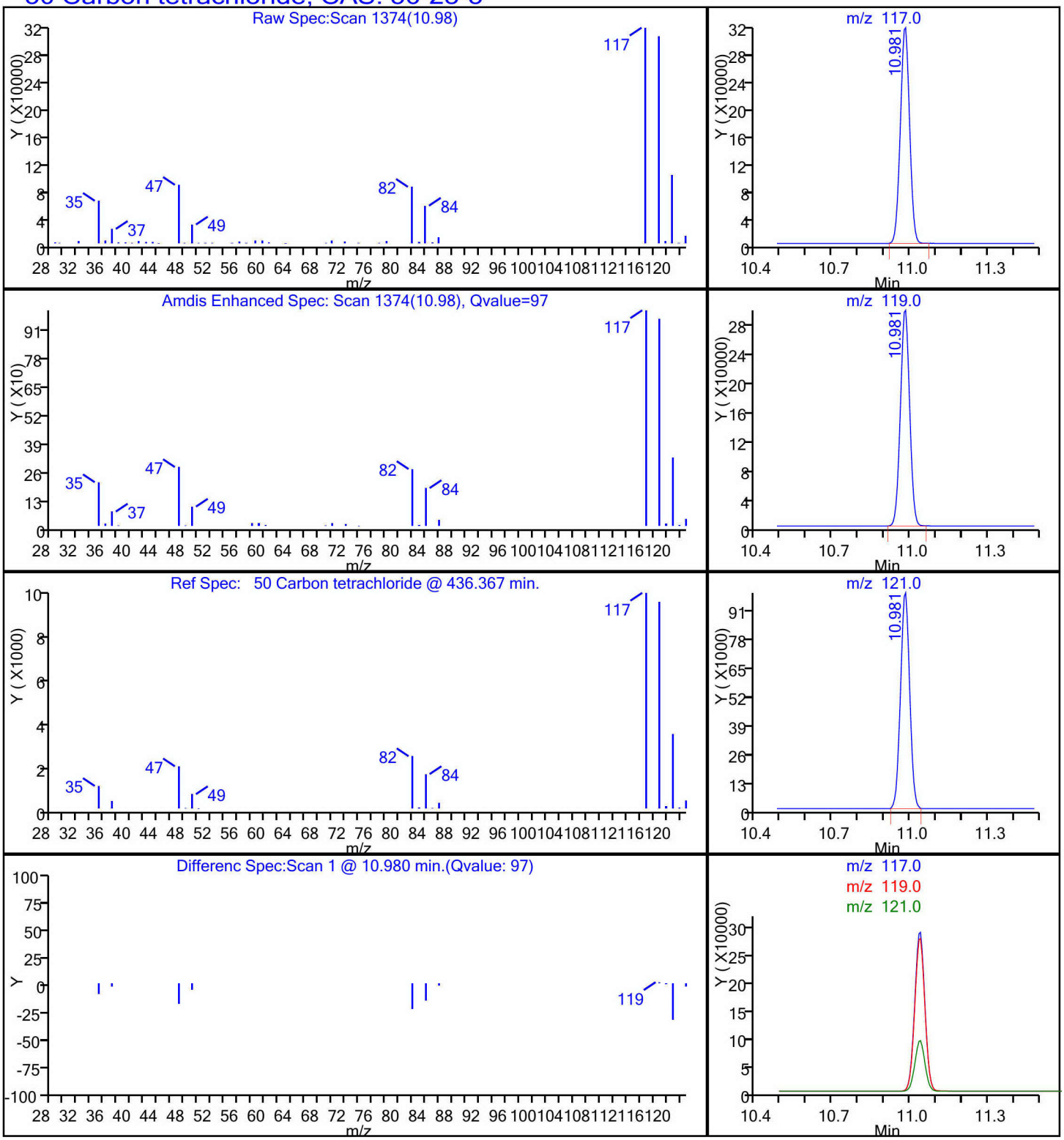
Report Date: 19-May-2014 11:21:20 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140515-684.b\JE16P108.D				
Injection Date:	16-May-2014 14:11:30	Instrument ID:	MJ		
Lims ID:	140-1353-A-3	Lab Sample ID:	140-1353-3		
Client ID:	B2WM04				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.4700		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

50 Carbon tetrachloride, CAS: 56-23-5



FORM VI
AIR - GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

May 23 2014

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1 Analy Batch No.: 946

SDG No.: W06725

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/11/2014 12:40 Calibration End Date: 03/11/2014 19:57 Calibration ID: 143

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-946/2	JICC111.D
Level 2	IC 140-946/3	JICC112.D
Level 3	IC 140-946/4	JICC113.D
Level 4	IC 140-946/5	JICC114.D
Level 5	IC 140-946/6	JICC115.D
Level 6	ICIS 140-946/7	JICC116.D
Level 7	IC 140-946/8	JICC117.D
Level 8	IC 140-946/9	JICC118.D
Level 9	IC 140-946/10	JICC119.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.3753	0.4978 0.3659	0.5073 0.4196	0.4028 0.3604	0.3733	Ave		0.4128				14.0		30.0			
Propene	+++++ 1.1609	+++++ 1.0928	1.5479 1.2091	1.3069 1.0396	1.2285	Ave		1.2265				14.0		30.0			
Dichlorodifluoromethane	4.0543 3.8605	4.1829 3.7019	4.4748 4.1665	3.9221 3.4793	3.8163	Ave		3.9621				7.4		30.0			
Chloromethane	0.4990 0.4300	0.5059 0.4083	0.5376 0.4477	0.4430 0.3527	0.4267	Ave		0.4501				13.0		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	3.0829 2.9363	2.9387 2.9036	3.2994 3.3134	2.7218 2.8449	2.8704	Ave		2.9902				6.8		30.0			
Acetaldehyde	+++++ 0.3869	+++++ 0.3394	0.5021 0.4038	0.3733 0.3144	0.4428	Ave		0.3947				16.0		40.0			
Vinyl chloride	1.5245 1.4510	1.5243 1.3825	1.7385 1.5461	1.4871 1.2615	1.4309	Ave		1.4829				8.8		30.0			
1,3-Butadiene	1.0318 0.9981	1.1281 0.9554	1.1902 1.0690	1.0309 0.8729	0.9968	Ave		1.0304				9.0		30.0			
Butane	2.4463 1.9819	2.4604 1.8724	2.4977 2.0463	2.0911 1.6158	1.9815	Ave		2.1104				14.0		30.0			
Bromomethane	1.6099 1.4285	1.6087 1.3888	1.7128 1.5877	1.4631 1.3671	1.4070	Ave		1.5082				8.2		30.0			
Chloroethane	0.7289 0.6460	0.7041 0.6345	0.7842 0.7144	0.6734 0.6077	0.6467	Ave		0.6822				8.1		30.0			
Ethanol	+++++ 0.3202	+++++ 0.3084	0.3784 0.3103	0.3380 0.2624	0.3301	Ave		0.3211				11.0		40.0			
Vinyl bromide	1.2510 1.2325	1.2858 1.2290	1.4459 1.4152	1.2277 1.2497	1.2076	Ave		1.2827				6.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

May 23 2014

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1 Analy Batch No.: 946

SDG No.: W06725

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/11/2014 12:40 Calibration End Date: 03/11/2014 19:57 Calibration ID: 143

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 1.5962	1.9901 1.5455	2.0881 1.7015	1.6610 1.4088	1.5999	Ave		1.6989				13.0		30.0			
Trichlorofluoromethane	3.4010 3.3842	3.4970 3.3373	3.9742 3.7583	3.3853 3.2490	3.3401	Ave		3.4807				6.7		30.0			
Acrolein	+++++ 0.3021	0.4128 0.2855	0.3655 0.3935	0.2328 0.3121	0.3081	Ave		0.3266				18.0		30.0			
Acetonitrile	+++++ 0.3368	0.4098 0.3061	0.4320 0.3943	0.3296 0.3403	0.3366	Ave		0.3607				12.0		30.0			
Acetone	+++++ 0.5780	+++++ 0.3424	+++++ 0.3699	0.7210 +++++	0.8316	Ave		0.5686				38.0	*	30.0			
Isopropyl alcohol	+++++ 1.4403	+++++ 1.4471	1.7112 1.5786	1.5277 1.3482	1.4569	Ave		1.5014				7.8		30.0			
Pentane	+++++ 0.2110	0.1929 0.2103	0.2420 0.2383	0.2107 0.2065	0.2100	Ave		0.2152				7.7		30.0			
Ethyl ether	+++++ 1.0219	1.2193 0.9461	1.2370 1.0985	0.8503 0.9217	1.0780	Ave		1.0466				13.0		30.0			
1,1-Dichloroethene	1.2472 1.0504	1.1312 1.0692	1.2574 1.1985	1.0484 1.0684	1.0359	Ave		1.1230				7.9		30.0			
tert-Butyl alcohol	+++++ 1.5527	2.1474 1.6753	2.1170 1.9312	1.9306 1.6797	1.7618	Ave		1.8495				12.0		30.0			
Acrylonitrile	0.6837 0.5684	0.6036 0.5529	0.6491 0.6783	0.4430 0.6032	0.5680	Ave		0.5945				13.0		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.4110 2.3296	2.4189 2.3382	2.7256 2.5850	2.3179 2.2877	2.2929	Ave		2.4119				6.2		30.0			
Methylene Chloride	+++++ 1.0284	+++++ 1.0127	1.3860 1.0525	1.0569 0.9311	1.0231	Ave		1.0701				14.0		30.0			
3-Chloropropene	+++++ 1.0457	1.4141 1.0202	1.4133 1.0428	1.0400 0.8935	1.0351	Ave		1.1131				17.0		30.0			
Carbon disulfide	3.8327 3.6559	3.8048 3.6157	4.3304 4.0136	3.6252 3.4128	3.5747	Ave		3.7629				7.3		30.0			
trans-1,2-Dichloroethene	1.5956 1.2849	1.4088 1.2971	1.5141 1.3354	1.2666 1.2156	1.2555	Ave		1.3526				9.5		30.0			
2-Methylpentane	3.5143 2.9748	3.3896 2.8931	3.6215 3.0116	2.9875 2.4248	2.9621	Ave		3.0866				12.0		40.0			
Methyl tert-butyl ether	+++++ 2.0306	2.2440 1.9367	2.3259 2.1576	1.7335 1.8416	2.0623	Ave		2.0415				9.8		30.0			
1,1-Dichloroethane	2.2983 2.0618	2.2481 2.0212	2.5871 1.9936	1.8978 1.7914	2.0982	Ave		2.1108				11.0		30.0			
Vinyl acetate	+++++ 1.8387	2.0207 1.7150	2.0413 2.1043	1.4173 1.8329	1.8240	Ave		1.8493				12.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

May 23 2014

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1 Analy Batch No.: 946

SDG No.: W06725

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/11/2014 12:40 Calibration End Date: 03/11/2014 19:57 Calibration ID: 143

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.3964	+++++ 0.3598	0.4111 0.3829	0.3437 0.3472	0.4093	Ave		0.3786				7.5		30.0			
C6 Range	+++++ 11.457	+++++ 10.950	14.161 11.507	11.950 10.055	11.668	Ave		11.678				11.0		30.0			
Hexane	1.2499 1.0288	1.1722 0.9966	1.2816 1.0234	1.0019 0.9009	1.0232	Ave		1.0754				12.0		30.0			
cis-1,2-Dichloroethene	+++++ 1.1421	1.2484 1.1159	1.4102 1.1085	1.0275 1.0343	1.1509	Ave		1.1547				11.0		30.0			
Ethyl acetate	+++++ 1.6675	1.8616 1.5787	1.8823 1.7022	1.3606 1.4909	1.6483	Ave		1.6490				11.0		30.0			
Chloroform	2.7060 2.2129	2.5161 2.1695	2.8522 2.1655	2.0807 1.9884	2.2854	Ave		2.3307				13.0		30.0			
Tetrahydrofuran	+++++ 0.8907	1.1007 0.8382	1.1060 0.9416	0.7993 0.8406	0.8948	Ave		0.9265				13.0		30.0			
1,1,1-Trichloroethane	2.5690 2.4044	2.5894 2.3199	2.9524 2.2395	2.2082 2.1153	2.4654	Ave		2.4293				10.0		30.0			
1,2-Dichloroethane	0.3524 0.2986	0.3242 0.3013	0.3469 0.2973	0.2680 0.3047	0.2994	Ave		0.3103				8.5		30.0			
1-Butanol	+++++ 0.0758	+++++ 0.0850	+++++ 0.1016	0.0902 0.0993	0.0728	Ave		0.0874				14.0		30.0			
Benzene	+++++ 0.6491	0.7894 0.6742	0.7885 0.6678	0.5956 0.6732	0.6526	Ave		0.6863				9.9		30.0			
Cyclohexane	0.1355 0.1326	0.1403 0.1351	0.1546 0.1320	0.1280 0.1295	0.1311	Ave		0.1354				6.0		30.0			
Carbon tetrachloride	0.5567 0.5334	0.5322 0.5682	0.6406 0.5720	0.5209 0.6134	0.5648	Ave		0.5669				6.9		30.0			
2,3-Dimethylpentane	0.1746 0.1531	0.1672 0.1548	0.1903 0.1594	0.1424 0.1580	0.1574	Ave		0.1619				8.6		40.0			
Thiophene	+++++ 0.4079	0.4449 0.4137	0.5038 0.4130	0.3692 0.4248	0.4135	Ave		0.4238				9.1		40.0			
2,2,4-Trimethylpentane	+++++ 1.1013	1.2866 1.1120	1.4233 1.1598	1.0650 1.0917	1.1349	Ave		1.1718				10.0		30.0			
Heptane	+++++ 0.2302	0.2523 0.2339	0.2876 0.2500	0.2069 0.2495	0.2312	Ave		0.2427				9.7		30.0			
1,2-Dichloropropane	0.2713 0.2248	0.2476 0.2244	0.2446 0.2162	0.1894 0.2424	0.2270	Ave		0.2320				9.9		30.0			
Trichloroethene	0.3681 0.3070	0.3361 0.3103	0.3882 0.3376	0.2860 0.3565	0.3066	Ave		0.3329				10.0		30.0			
Dibromomethane	0.3519 0.2871	0.3135 0.2904	0.3463 0.3019	0.2521 0.3144	0.2898	Ave		0.3053				10.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

May 23 2014

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1 Analy Batch No.: 946

SDG No.: W06725

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/11/2014 12:40 Calibration End Date: 03/11/2014 19:57 Calibration ID: 143

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Bromodichloromethane	0.5415 0.4610	0.4794 0.4772	0.5203 0.5090	0.3917 0.5236	0.4559	Ave		0.4844				9.4		30.0			
1,4-Dioxane	0.0864 0.0761	0.0789 0.0837	0.0861 0.0932	0.0734 0.0944	0.0759	Ave		0.0831				9.1		30.0			
Methyl methacrylate	+++++ 0.2033	0.2108 0.2121	0.2172 0.2415	0.1522 0.2315	0.1963	Ave		0.2081				13.0		30.0			
Methylcyclohexane	0.5084 0.4369	0.4885 0.4352	0.5437 0.4447	0.4036 0.4462	0.4506	Ave		0.4620				9.4		40.0			
4-Methyl-2-pentanone (MIBK)	0.4768 0.4049	0.4050 0.4208	0.3722 0.5038	0.3199 0.4786	0.3915	Ave		0.4193				14.0		30.0			
cis-1,3-Dichloropropene	0.3912 0.3148	0.3360 0.3226	0.3321 0.3286	0.2584 0.3651	0.3130	Ave		0.3291				11.0		30.0			
trans-1,3-Dichloropropene	+++++ 0.3239	0.3387 0.3309	0.3498 0.3384	0.2652 0.3768	0.3281	Ave		0.3315				9.5		30.0			
Toluene	+++++ 0.7167	0.8202 0.7308	0.8244 0.7195	0.6019 0.7841	0.7388	Ave		0.7420				9.6		30.0			
Toluene Range	+++++ 1.7355	1.8850 1.7414	2.3214 1.7164	1.4393 1.8607	1.7681	Ave		1.8085				14.0		30.0			
1,1,2-Trichloroethane	+++++ 0.2300	0.2512 0.2324	0.2564 0.2257	0.1979 0.2522	0.2355	Ave		0.2352				8.1		30.0			
2-Methylthiophene	+++++ 0.6589	0.7303 0.6637	0.7306 0.6296	0.5576 0.7008	0.6632	Ave		0.6668				8.5		40.0			
3-Methylthiophene	+++++ 0.6573	0.7094 0.6674	0.7385 0.6367	0.5566 0.7128	0.6732	Ave		0.6690				8.4		40.0			
2-Hexanone	0.2893 0.2225	0.2360 0.2440	0.2090 0.2907	0.1958 0.2785	0.2215	Ave		0.2430				15.0		30.0			
C8 Range	+++++ 2.5227	+++++ 2.5151	4.1853 2.4822	2.7311 2.3967	2.7836	Ave		2.8024				22.0		30.0			
Octane	+++++ 0.2554	0.2894 0.2698	0.3001 0.2764	0.2400 0.2819	0.2649	Ave		0.2723				7.0		30.0			
Dibromochloromethane	0.5683 0.4999	0.4537 0.5452	0.4884 0.5757	0.4110 0.6423	0.4872	Ave		0.5191				14.0		30.0			
1,2-Dibromoethane (EDB)	+++++ 0.3904	0.4062 0.3997	0.4255 0.4060	0.3250 0.4746	0.3969	Ave		0.4030				10.0		30.0			
Tetrachloroethene	0.4307 0.3126	0.3606 0.3248	0.3860 0.3276	0.2918 0.3623	0.3149	Ave		0.3457				13.0		30.0			
Chlorobenzene	0.7600 0.5843	0.6366 0.6134	0.6670 0.6220	0.5083 0.7170	0.5962	Ave		0.6339				12.0		30.0			
2,3-Dimethylheptane	+++++ 0.7774	1.0016 0.7981	0.9243 0.7543	0.8155 0.6301	0.8355	Ave		0.8171				14.0		40.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

May 23 2014

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1 Analy Batch No.: 946

SDG No.: W06725

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/11/2014 12:40 Calibration End Date: 03/11/2014 19:57 Calibration ID: 143

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Ethylbenzene	+++++ 0.7809	0.8590 0.7918	0.9295 0.8662	0.6485 0.8867	0.7945	Ave		0.8196				11.0		30.0			
2-Ethylthiophene	+++++ 0.6211	0.6509 0.6348	0.7104 0.6760	0.5063 0.7092	0.6300	Ave		0.6423				10.0		40.0			
m-Xylene & p-Xylene	0.8724 0.6048	0.6478 0.6174	0.7195 0.6892	0.5053 0.6848	0.6113	Ave		0.6614				15.0		30.0			
Nonane	0.5849 0.4962	0.5269 0.5198	0.5003 0.5325	0.4350 0.5270	0.5092	Ave		0.5146				7.7		30.0			
Bromoform	0.3869 0.3941	0.3029 0.4477	0.3351 0.5176	0.2786 0.6525	0.3753	Ave		0.4101				28.0		30.0			
Styrene	0.4586 0.4545	0.3795 0.4737	0.4178 0.5566	0.3161 0.5951	0.4359	Ave		0.4542				19.0		30.0			
o-Xylene	+++++ 0.6220	0.6989 0.6334	0.7758 0.7157	0.5518 0.7183	0.6477	Ave		0.6705				10.0		30.0			
1,1,2,2-Tetrachloroethane	0.6366 0.5114	0.4928 0.5428	0.5223 0.6379	0.4404 0.6334	0.5127	Ave		0.5478				13.0		30.0			
1,2,3-Trichloropropane	0.1442 0.1219	0.1181 0.1290	0.1305 0.1531	0.1029 0.1606	0.1220	Ave		0.1314				14.0		30.0			
Isopropylbenzene	+++++ 0.8840	0.9896 0.9244	1.0486 1.0733	0.7621 1.0613	0.8995	Ave		0.9553				11.0		30.0			
Propylbenzene	0.2681 0.2341	0.2110 0.2500	0.2443 0.3134	0.1854 0.3341	0.2269	Ave		0.2519				19.0		30.0			
2-Chlorotoluene	0.3095 0.2380	0.2477 0.2491	0.2685 0.2880	0.2030 0.3199	0.2426	Ave		0.2629				14.0		30.0			
4-Ethyltoluene	+++++ 0.8311	0.8416 0.8990	0.8896 1.0959	0.6810 1.0745	0.8145	Ave		0.8909				15.0		30.0			
1,3,5-Trimethylbenzene	0.4938 0.3981	0.4061 0.4350	0.4303 0.5543	0.3429 0.5787	0.3917	Ave		0.4479				18.0		30.0			
Alpha Methyl Styrene	+++++ 0.3207	+++++ 0.3696	0.2496 0.4870	0.2079 +++++	0.2910	Ave		0.3209				31.0	*	30.0			
Decane	0.6374 0.5292	0.5113 0.5642	0.5207 0.6272	0.4260 0.5826	0.5375	Ave		0.5485				12.0		30.0			
tert-Butylbenzene	0.9408 0.7767	0.8087 0.8608	0.8237 1.1089	0.6758 1.1051	0.7724	Ave		0.8748				17.0		30.0			
1,2,4-Trimethylbenzene	0.8860 0.7036	0.6832 0.7761	0.7207 0.9851	0.5785 0.9682	0.6901	Ave		0.7768				18.0		30.0			
sec-Butylbenzene	1.2822 1.0386	1.0421 1.1381	1.0626 1.4231	0.8765 1.3609	1.0370	Ave		1.1401				16.0		30.0			
1,3-Dichlorobenzene	0.6165 0.4316	0.4587 0.4814	0.4606 0.6381	0.3506 0.7371	0.4206	Ave		0.5106				24.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI

May 23 2014

AIR - GC/MS VOA INITIAL CALIBRATION DATA

INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1 Analy Batch No.: 946

SDG No.: W06725

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/11/2014 12:40 Calibration End Date: 03/11/2014 19:57 Calibration ID: 143

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzyl chloride	+++++ 0.5194	0.5259 0.5969	0.5293 0.7868	0.4001 0.8036	0.4796	Ave		0.5802				25.0		30.0			
1,4-Dichlorobenzene	0.5812 0.3946	0.4226 0.4405	0.4275 0.6043	0.3295 0.6990	0.3777	Ave		0.4752				26.0		30.0			
4-Isopropyltoluene	1.0099 0.8431	0.8059 0.9293	0.8117 1.1712	0.6811 1.1487	0.8256	Ave		0.9141				18.0		30.0			
1,2,3-Trimethylbenzene	+++++ 0.5818	0.6038 0.6245	0.6126 0.7801	0.5165 0.7656	0.5791	Ave		0.6330				15.0		40.0			
Butylcyclohexane	0.8668 0.6633	0.7527 0.6998	0.6856 0.7692	0.5955 0.7699	0.6994	Ave		0.7225				11.0		40.0			
1,2-Dichlorobenzene	0.5645 0.4286	0.4298 0.4797	0.4422 0.6537	0.3508 0.7309	0.4147	Ave		0.4994				25.0		30.0			
Indane	+++++ 0.6382	0.6553 0.7031	0.6522 0.9291	0.5340 0.9433	0.6228	Ave		0.7098				21.0		40.0			
Butylbenzene	0.9460 0.7809	0.7473 0.8777	0.7741 1.1149	0.6052 1.0417	0.7458	Ave		0.8482				19.0		30.0			
Indene	0.7207 0.5892	0.5164 0.6812	0.5351 0.9374	0.4341 +++++	0.5474	Ave		0.6202				25.0		40.0			
Undecane	+++++ 0.5055	0.5604 0.5578	0.5305 0.6932	0.4489 0.6332	0.4907	Ave		0.5525				14.0		30.0			
1,2-Dimethyl-4-Ethylbenzene	0.9638 0.7782	0.7650 0.8711	0.7308 1.1243	0.6104 1.1208	0.7493	Ave		0.8571				21.0		40.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.8069	0.8466 0.9215	0.7831 1.2072	0.6737 +++++	0.7884	Ave		0.8611				20.0		40.0			
1,2,3,5-Tetramethylbenzene	0.6914 0.4976	0.5735 0.5663	0.5216 0.7214	0.4291 +++++	0.4957	Ave		0.5621				18.0		40.0			
1,2,3,4-Tetramethylbenzene	+++++ 0.6318	0.7601 0.7192	0.6390 0.9406	0.5613 +++++	0.6223	Ave		0.6963				18.0		40.0			
Dodecane	+++++ 0.5222	0.6219 0.5549	0.5826 0.6951	0.4960 0.5857	0.5184	Ave		0.5721				11.0		30.0			
1,2,4-Trichlorobenzene	+++++ 0.1978	0.2393 0.2353	0.1875 0.3503	0.1589 +++++	0.1860	Ave		0.2222				28.0		30.0			
Naphthalene	+++++ 0.5440	0.6054 0.6234	0.5204 0.8528	0.4570 0.9116	0.5206	Ave		0.6294				26.0		30.0			
Benzo(b)thiophene	+++++ 0.3584	0.4411 0.4226	0.3316 0.5886	0.2931 0.6439	0.3327	Ave		0.4265				30.0		40.0			
Hexachlorobutadiene	+++++ 0.3710	0.4779 0.4186	0.4112 0.5814	0.3414 0.6501	0.3803	Ave		0.4540				24.0		30.0			
1,2,3-Trichlorobenzene	+++++ 0.2455	0.2949 0.2721	0.2520 0.3767	0.2213 0.3886	0.2456	Ave		0.2871				22.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI

May 23 2014

AIR - GC/MS VOA INITIAL CALIBRATION DATA

INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1 Analy Batch No.: 946

SDG No.: W06725

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/11/2014 12:40 Calibration End Date: 03/11/2014 19:57 Calibration ID: 143

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylnaphthalene	+++++ 0.0679	0.0753 0.0753	0.0599 0.1029	0.0578 0.0298	0.0666	Ave		0.0669				31.0		40.0			
1-Methylnaphthalene	+++++ 0.0730	0.0816 0.0750	0.0695 0.0927	0.0679 0.0189	0.0735	Ave		0.0690				31.0		40.0			
4-Bromofluorobenzene (Surr)	0.6600 0.7176	0.6934 0.7283	0.7134 0.7225	0.6897 0.7235	0.7189	Ave		0.7075				3.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI

May 23 2014

AIR - GC/MS VOA INITIAL CALIBRATION DATA

INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1 Analy Batch No.: 946

SDG No.: W06725

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/11/2014 12:40 Calibration End Date: 03/11/2014 19:57 Calibration ID: 143

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-946/2	JICC111.D
Level 2	IC 140-946/3	JICC112.D
Level 3	IC 140-946/4	JICC113.D
Level 4	IC 140-946/5	JICC114.D
Level 5	IC 140-946/6	JICC115.D
Level 6	ICIS 140-946/7	JICC116.D
Level 7	IC 140-946/8	JICC117.D
Level 8	IC 140-946/9	JICC118.D
Level 9	IC 140-946/10	JICC119.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 65895	3504 127336	7250 267278	13846 505684	32729	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 203864	+++++ 380299	22123 770175	44922 1458925	107699	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	14707 677907	29444 1288306	63957 2653935	134818 4882515	334566	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	1810 75510	3561 142083	7684 285173	15228 494916	37407	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroeth ane	CBM	Ave	11183 515628	20686 1010496	47157 2110535	93560 3992171	251641	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 339724	+++++ 590590	35881 1285979	64164 2205919	194092	+++++ 10.0	+++++ 20.0	0.800 40.0	2.00 80.0	5.00
Vinyl chloride	CBM	Ave	5530 254791	10730 481131	24848 984783	51116 1770210	125449	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	3743 175277	7941 332507	17011 680934	35435 1224939	87385	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Butane	CBM	Ave	8874 348021	17319 651614	35698 1303426	71879 2267439	173714	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	5840 250854	11324 483336	24480 1011303	50293 1918491	123346	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	2644 113435	4956 220811	11208 455037	23148 852776	56692	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 281128	+++++ 536616	27045 988374	58098 1841235	144711	+++++ 10.0	+++++ 20.0	0.800 40.0	2.00 80.0	5.00
Vinyl bromide	CBM	Ave	4538 216421	9051 427699	20665 901463	42200 1753642	105872	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	+++++ 280290	14009 537867	29844 1083786	57096 1976924	140258	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

May 23 2014

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1 Analy Batch No.: 946

SDG No.: W06725

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/11/2014 12:40 Calibration End Date: 03/11/2014 19:57 Calibration ID: 143

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	12337 594264	24616 1161422	56802 2393900	116368 4559353	292818	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 53042	2906 99357	5224 250642	8002 437980	27013	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 59141	2885 106520	6174 251140	11328 477609	29505	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 101503	+++++ 119169	+++++ 235590	24784 +++++	72907	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 +++++	1.00
Isopropyl alcohol	CBM	Ave	+++++ 252925	+++++ 503623	24457 1005537	52512 1891993	127722	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	1.00
Pentane	CBM	Ave	+++++ 37045	1358 73196	3459 151771	7244 289822	18413	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	+++++ 179455	8583 329259	17680 699710	29228 1293462	94508	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	4524 184446	7963 372110	17971 763429	36039 1499326	90818	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	+++++ 272663	15116 583041	30258 1230118	66363 2357157	154458	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	2480 99812	4249 192415	9278 432058	15228 846522	49792	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	8746 409082	17027 813723	38956 1646524	79676 3210350	201012	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 180581	+++++ 352418	19809 670417	36329 1306630	89695	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 183622	9954 355060	20200 664240	35748 1253863	90749	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	13903 641989	26783 1258326	61892 2556516	124614 4789123	313388	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	5788 225627	9917 451426	21641 850575	43537 1705804	110071	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	12748 522389	23860 1006835	51760 1918287	102693 3402713	259682	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	+++++ 356577	15796 673998	33243 1374295	59586 2584260	180801	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	8337 362051	15825 703411	36976 1269839	65235 2513809	183945	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	+++++ 322885	14224 596834	29176 1340341	48718 2572051	159904	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 69610	+++++ 125222	5876 243895	11813 487204	35887	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	1.00
C6 Range	CBM	Ave	+++++ 2011864	+++++ 3810714	202396 7329744	410756 14110311	1022928	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

May 23 2014

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1 Analy Batch No.: 946

SDG No.: W06725

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/11/2014 12:40 Calibration End Date: 03/11/2014 19:57 Calibration ID: 143

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Hexane	CBM	Ave	4534 180662	8251 346825	18317 651848	34438 1264226	89704	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	+++++ 200551	8788 388357	20156 706076	35319 1451411	100896	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	+++++ 292814	13104 549427	26903 1084225	46769 2092150	144504	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	9816 388598	17711 755016	40765 1379316	71523 2790275	200359	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 156408	7748 291715	15807 599765	27476 1179659	78446	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	9319 422225	18227 807351	42198 1426505	75903 2968435	216140	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFB	Ave	5688 248475	11010 473508	23652 840072	43695 1727411	125298	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1-Butanol	DFB	Ave	+++++ 63073	+++++ 133536	+++++ 287181	14706 562689	30453	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Benzene	DFB	Ave	+++++ 540059	26808 1059675	53761 1886757	97096 3816101	273136	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Cyclohexane	DFB	Ave	2187 110363	4766 212371	10543 372992	20873 734107	54874	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFB	Ave	8987 443845	18074 893077	43678 1616119	84912 3477511	236385	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFB	Ave	2819 127368	5679 243353	12974 450381	23214 895905	65875	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Thiophene	DFB	Ave	+++++ 339429	15107 650293	34350 1166754	60186 2407949	173039	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFB	Ave	+++++ 916367	43691 1747868	97042 3277019	173617 6188593	474988	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Heptane	DFB	Ave	+++++ 191563	8567 367648	19608 706282	33732 1414497	96771	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFB	Ave	4380 187039	8407 352739	16678 610860	30869 1374081	95014	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Trichloroethene	DFB	Ave	5942 255418	11412 487687	26470 953846	46631 2020928	128335	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Dibromomethane	DFB	Ave	5681 238917	10647 456395	23612 853084	41095 1782109	121268	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Bromodichloromethane	DFB	Ave	8741 383587	16281 749991	35477 1438067	63861 2968189	190788	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,4-Dioxane	DFB	Ave	1394 63279	2681 131505	5872 263409	11964 535040	31775	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Methyl methacrylate	DFB	Ave	+++++ 169117	7159 333332	14809 682355	24813 1312475	82170	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

May 23 2014

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1 Analy Batch No.: 946

SDG No.: W06725

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/11/2014 12:40 Calibration End Date: 03/11/2014 19:57 Calibration ID: 143

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methylcyclohexane	DFB	Ave	8207 363492	16589 683968	37072 1256319	65787 2529310	188580	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFB	Ave	7697 336876	13754 661355	25379 1423315	52154 2713031	163854	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFB	Ave	6314 261947	11409 507092	22640 928432	42126 2069482	131004	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZ	Ave	+++++ 234824	9630 446194	20295 879585	35040 1963516	117538	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Toluene	CBZ	Ave	+++++ 519669	23320 985546	47832 1869974	79532 4086312	264651	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Toluene Range	CBZ	Ave	+++++ 1258419	53595 2348373	134690 4461089	190190 9697293	633377	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZ	Ave	+++++ 166783	7143 313466	14877 586633	26153 1314579	84373	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZ	Ave	+++++ 477759	20765 895031	42390 1636492	73689 3652163	237579	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZ	Ave	+++++ 476584	20169 900038	42847 1654764	73553 3714685	241139	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
2-Hexanone	CBZ	Ave	3616 161365	6711 329061	12124 755508	25873 1451418	79350	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
C8 Range	CBZ	Ave	+++++ 1829147	+++++ 3391784	242838 6451566	360891 12490633	997149	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	1.00
Octane	CBZ	Ave	+++++ 185219	8228 363887	17415 718344	31719 1469379	94899	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZ	Ave	7103 362439	12900 735197	28336 1496245	54305 3347546	174527	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZ	Ave	+++++ 283094	11550 539062	24689 1055365	42940 2473337	142171	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZ	Ave	5383 226667	10252 437989	22395 851426	38555 1888055	112818	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Chlorobenzene	CBZ	Ave	9499 423684	18101 827157	38702 1616541	67168 3736744	213586	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZ	Ave	+++++ 563663	28479 1076318	53631 1960561	107761 3283977	299289	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Ethylbenzene	CBZ	Ave	+++++ 566249	24423 1067867	53929 2251254	85699 4621160	284603	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZ	Ave	+++++ 450374	18507 856076	41218 1757131	66902 3695934	225682	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
m-Xylene & p-Xylene	CBZ	Ave	21806 877038	36838 1665289	83497 3582524	133531 7138010	437938	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0	2.00
Nonane	CBZ	Ave	7310 359753	14980 701033	29027 1384118	57485 2746405	182421	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

May 23 2014

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1 Analy Batch No.: 946

SDG No.: W06725

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/11/2014 12:40 Calibration End Date: 03/11/2014 19:57 Calibration ID: 143

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bromoform	CBZ	Ave	4835 285787	8612 603733	19445 1345387	36819 3400531	134430	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Styrene	CBZ	Ave	5732 329540	10790 638753	24244 1446724	41766 3101488	156161	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
o-Xylene	CBZ	Ave	+++++ 451038	19871 854151	45016 1860295	72917 3743538	232024	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZ	Ave	7957 370844	14012 731970	30304 1658051	58192 3301073	183648	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZ	Ave	1802 88416	3358 174026	7573 398010	13592 836915	43710	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZ	Ave	+++++ 640978	28138 1246662	60842 2789508	100706 5530866	322210	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Propylbenzene	CBZ	Ave	3351 169743	6000 337130	14173 814479	24502 1741082	81294	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZ	Ave	3868 172536	7042 335960	15581 748591	26819 1667404	86903	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZ	Ave	+++++ 602615	23930 1212360	51618 2848420	89983 5599605	291767	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZ	Ave	6172 288648	11546 586616	24966 1440763	45307 3015712	140307	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZ	Ave	+++++ 232501	+++++ 498439	14480 1265706	27470 +++++	104233	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 +++++	1.00
Decane	CBZ	Ave	7967 383736	14539 760833	30213 1630218	56293 3036195	192549	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZ	Ave	11758 563181	22994 1160846	47790 2882125	89301 5759135	276681	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZ	Ave	11073 510168	19426 1046672	41818 2560408	76446 5045591	247215	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZ	Ave	16025 753094	29629 1534847	61653 3698797	115821 7092519	371473	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZ	Ave	7705 312974	13041 649208	26725 1658482	46329 3841334	150681	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Benzyl chloride	CBZ	Ave	+++++ 376583	14954 804987	30711 2044904	52876 4188073	171797	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZ	Ave	7264 286084	12015 593980	24804 1570678	43546 3642996	135286	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZ	Ave	12622 611347	22915 1253285	47097 3044134	90008 5986441	295742	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,2,3-Trimethylbenzene	CBZ	Ave	+++++ 421832	17168 842178	35544 2027503	68250 3990183	207460	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZ	Ave	10834 480940	21401 943677	39782 1999366	78686 4012634	250533	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

May 23 2014

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1 Analy Batch No.: 946

SDG No.: W06725

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/11/2014 12:40 Calibration End Date: 03/11/2014 19:57 Calibration ID: 143

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2-Dichlorobenzene	CBZ	Ave	7055 310746	12220 646950	25655 1699055	46356 3809042	148540	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Indane	CBZ	Ave	+++++ 462728	18631 948230	37844 2414878	70569 4915942	223109	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Butylbenzene	CBZ	Ave	11823 566214	21249 1183694	44913 2897714	79971 5428724	267179	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Indene	CBZ	Ave	9007 427230	14683 918630	31046 2436478	57358 +++++	196085	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 +++++	1.00
Undecane	CBZ	Ave	+++++ 366563	15935 752219	30780 1801735	59319 3299916	175793	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZ	Ave	12046 564256	21750 1174726	42402 2922288	80666 5841120	268427	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZ	Ave	+++++ 585097	24071 1242657	45438 3137565	89023 +++++	282429	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 +++++	1.00
1,2,3,5-Tetramethylbenzene	CBZ	Ave	8641 360803	16306 763734	30265 1875036	56702 +++++	177582	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 +++++	1.00
1,2,3,4-Tetramethylbenzene	CBZ	Ave	+++++ 458134	21613 969881	37074 2444837	74166 +++++	222908	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 +++++	1.00
Dodecane	CBZ	Ave	+++++ 378646	17682 748275	33803 1806559	65545 3052464	185701	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZ	Ave	+++++ 143447	6805 317385	10877 910586	21000 +++++	66621	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 +++++	1.00
Naphthalene	CBZ	Ave	+++++ 394479	17213 840765	30193 2216472	60395 4750981	186491	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Benzo(b)thiophene	CBZ	Ave	+++++ 259843	12541 569891	19240 1529823	38727 3355982	119182	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
Hexachlorobutadiene	CBZ	Ave	+++++ 268985	13588 564546	23861 1511092	45108 3388138	136244	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZ	Ave	+++++ 178007	8385 366981	14621 979161	29244 2025463	87992	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZ	Ave	+++++ 307709	13381 634411	21725 1671920	47754 969606	149184	+++++ 12.5	0.500 25.0	1.00 50.0	2.50 100	6.25
1-Methylnaphthalene	CBZ	Ave	+++++ 331073	14503 631891	25220 1506542	56061 616839	164584	+++++ 12.5	0.500 25.0	1.00 50.0	2.50 100	6.25
4-Bromofluorobenzene (Surr)	CBZ	Ave	824893 1040623	985783 982151	1034797 938909	911404 942607	1030162	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

Curve Type Legend:
Ave = Average ISTD

May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC111.D
Lims ID: IC L1 Lab Sample ID:
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 11-Mar-2014 12:40:30 ALS Bottle#: 8 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: ICAL1,,1,1,,ICAL 0.04
Misc. Info.: J031114I,TO15,,140-0000516-002
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub3

Method: \\KNXCHROM\ChromData\MJ\20140311-516.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Mar-2014 14:46:11 Calib Date: 11-Mar-2014 19:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 14-Mar-2014 14:46:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.387	9.392	-0.005	92	362747	4.00	
* 2 1,4-Difluorobenzene	114	11.544	11.547	-0.003	94	1614195	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.208	16.208	0.0	87	1249833	4.00	
$ 5 4-Bromofluorobenzene (Surr)	95	17.828	17.825	0.003	90	824893	3.73	
6 Chlorodifluoromethane	67	3.965	3.960	0.005	90	2070	0.0553	
7 Propene	41	3.975	3.973	0.002	94	6874	0.0618	
8 Dichlorodifluoromethane	85	4.035	4.029	0.006	90	14707	0.0409	
9 Chloromethane	52	4.239	4.230	0.009	40	1810	0.0443	
10 1,2-Dichloro-1,1,2,2-tetrafluoro	135	4.239	4.238	0.001	84	11183	0.0412	
11 Acetaldehyde	44	4.400	4.398	0.002	99	23295	0.6509	
12 Vinyl chloride	62	4.422	4.419	0.003	30	5530	0.0411	
14 Butadiene	54	4.519	4.517	0.002	56	3743	0.0401	
13 Butane	43	4.519	4.517	0.002	83	8874	0.0464	
15 Bromomethane	94	4.868	4.871	-0.003	83	5840	0.0427	
16 Chloroethane	64	5.024	5.027	-0.003	67	2644	0.0427	
17 Ethanol	31	5.127	5.122	0.005	92	10598	0.3639	
18 Vinyl bromide	106	5.358	5.357	0.001	66	4538	0.0390	
19 2-Methylbutane	43	5.406	5.411	-0.005	73	8284	0.0538	
20 Trichlorofluoromethane	101	5.643	5.647	-0.004	75	12337	0.0391	
21 Acrolein	56	5.654	5.650	0.004	2	1845	0.0623	
22 Acetonitrile	40	5.718	5.720	-0.002	72	365	0.0112	
23 Acetone	58	5.783	5.776	0.007	81	13132	0.2547	
24 Isopropyl alcohol	45	5.869	5.858	0.011	45	8126	0.0597	
25 Pentane	72	5.880	5.884	-0.004	84	563	0.0288	
26 Ethyl ether	31	6.073	6.059	0.014	82	6445	0.0679	
27 1,1-Dichloroethene	96	6.396	6.399	-0.003	54	4524	0.0444	
28 2-Methyl-2-propanol	59	6.504	6.487	0.017	68	8253	0.0492	
29 Acrylonitrile	53	6.498	6.498	0.0	35	2480	0.0460	
30 1,1,2-Trichloro-1,2,2-trifluoroe	101	6.590	6.586	0.004	77	8746	0.0400	
31 Methylene Chloride	84	6.757	6.759	-0.002	87	6749	0.0695	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.778	6.778	0.0	67	6354	0.0629	
33 Carbon disulfide	76	6.940	6.942	-0.002	91	13903	0.0407	
34 trans-1,2-Dichloroethene	96	7.601	7.609	-0.008	64	5788	0.0472	
35 2-Methylpentane	43	7.633	7.631	0.002	88	12748	0.0455	
36 Methyl tert-butyl ether	73	7.752	7.738	0.014	58	9876	0.0533	
37 1,1-Dichloroethane	63	8.037	8.041	-0.004	29	8337	0.0436	
38 Vinyl acetate	43	8.145	8.141	0.004	82	8474	0.0505	
39 2-Butanone (MEK)	72	8.607	8.601	0.006	84	2486	0.0724	
40 Hexane	56	8.645	8.642	0.003	81	4534	0.0465	
41 cis-1,2-Dichloroethene	96	9.054	9.052	0.002	52	5401	0.0516	
42 Ethyl acetate	43	9.237	9.229	0.008	82	8452	0.0565	
43 Chloroform	83	9.398	9.403	-0.005	14	9816	0.0464	
44 Tetrahydrofuran	42	9.839	9.816	0.023	86	4727	0.0563	
45 1,1,1-Trichloroethane	97	10.447	10.450	-0.003	62	9319	0.0423	
46 1,2-Dichloroethane	62	10.549	10.547	0.002	46	5688	0.0454	
47 n-Butanol	31	10.974	10.958	0.016	70	3817	0.1082	
48 Benzene	78	11.033	11.033	0.0	68	14955	0.0540	
49 Cyclohexane	69	11.039	11.040	-0.001	65	2187	0.0400	
50 Carbon tetrachloride	117	11.060	11.059	0.001	85	8987	0.0393	
51 2,3-Dimethylpentane	71	11.146	11.148	-0.002	77	2819	0.0431	
52 Thiophene	84	11.292	11.297	-0.005	47	8045	0.0470	
53 Isooctane	57	11.765	11.771	-0.006	91	23809	0.0503	
54 n-Heptane	71	12.131	12.130	0.001	80	4763	0.0486	
55 1,2-Dichloropropane	63	12.211	12.214	-0.003	55	4380	0.0468	
56 Trichloroethene	130	12.254	12.252	0.002	64	5942	0.0442	
57 Dibromomethane	93	12.330	12.332	-0.002	78	5681	0.0461	
59 Dichlorobromomethane	83	12.470	12.472	-0.002	76	8741	0.0447	
58 1,4-Dioxane	88	12.497	12.483	0.014	40	1394	0.0416	
60 Methyl methacrylate	41	12.550	12.548	0.002	38	4643	0.0553	
61 Methylcyclohexane	83	13.013	13.013	0.0	80	8207	0.0440	
62 4-Methyl-2-pentanone (MIBK)	43	13.390	13.382	0.008	81	7697	0.0455	
63 cis-1,3-Dichloropropene	75	13.443	13.448	-0.005	57	6314	0.0475	
64 trans-1,3-Dichloropropene	75	14.126	14.126	0.0	59	5825	0.0562	
65 Toluene	91	14.261	14.262	-0.001	71	13203	0.0569	
66 1,1,2-Trichloroethane	83	14.326	14.328	-0.002	41	3627	0.0494	
67 2-Methylthiophene	97	14.412	14.413	-0.001	66	11278	0.0541	
68 3-Methylthiophene	97	14.611	14.612	-0.001	67	11032	0.0528	
69 2-Hexanone	58	14.702	14.694	0.008	77	3616	0.0476	
70 n-Octane	85	14.928	14.928	0.0	82	4390	0.0516	
71 Chlorodibromomethane	129	15.025	15.027	-0.002	53	7103	0.0438	
72 Ethylene Dibromide	107	15.315	15.317	-0.002	58	6293	0.0500	
73 Tetrachloroethene	129	15.391	15.393	-0.002	77	5383	0.0498	
75 Chlorobenzene	112	16.251	16.256	-0.005	75	9499	0.0480	
74 2,3-Dimethylheptane	43	16.262	16.260	0.002	91	14337	0.0562	
76 Ethylbenzene	91	16.536	16.536	0.0	73	14130	0.0552	
77 2-Ethylthiophene	97	16.633	16.638	-0.005	30	10632	0.0530	
78 m-Xylene & p-Xylene	91	16.698	16.696	0.002	92	21806	0.1055	
79 n-Nonane	57	17.096	17.098	-0.002	81	7310	0.0455	
81 Bromoform	173	17.150	17.149	0.001	52	4835	0.0377	
80 Styrene	104	17.155	17.157	-0.002	57	5732	0.0404	
82 o-Xylene	91	17.220	17.220	0.0	75	12031	0.0574	
83 1,1,2,2-Tetrachloroethane	83	17.532	17.534	-0.002	50	7957	0.0465	

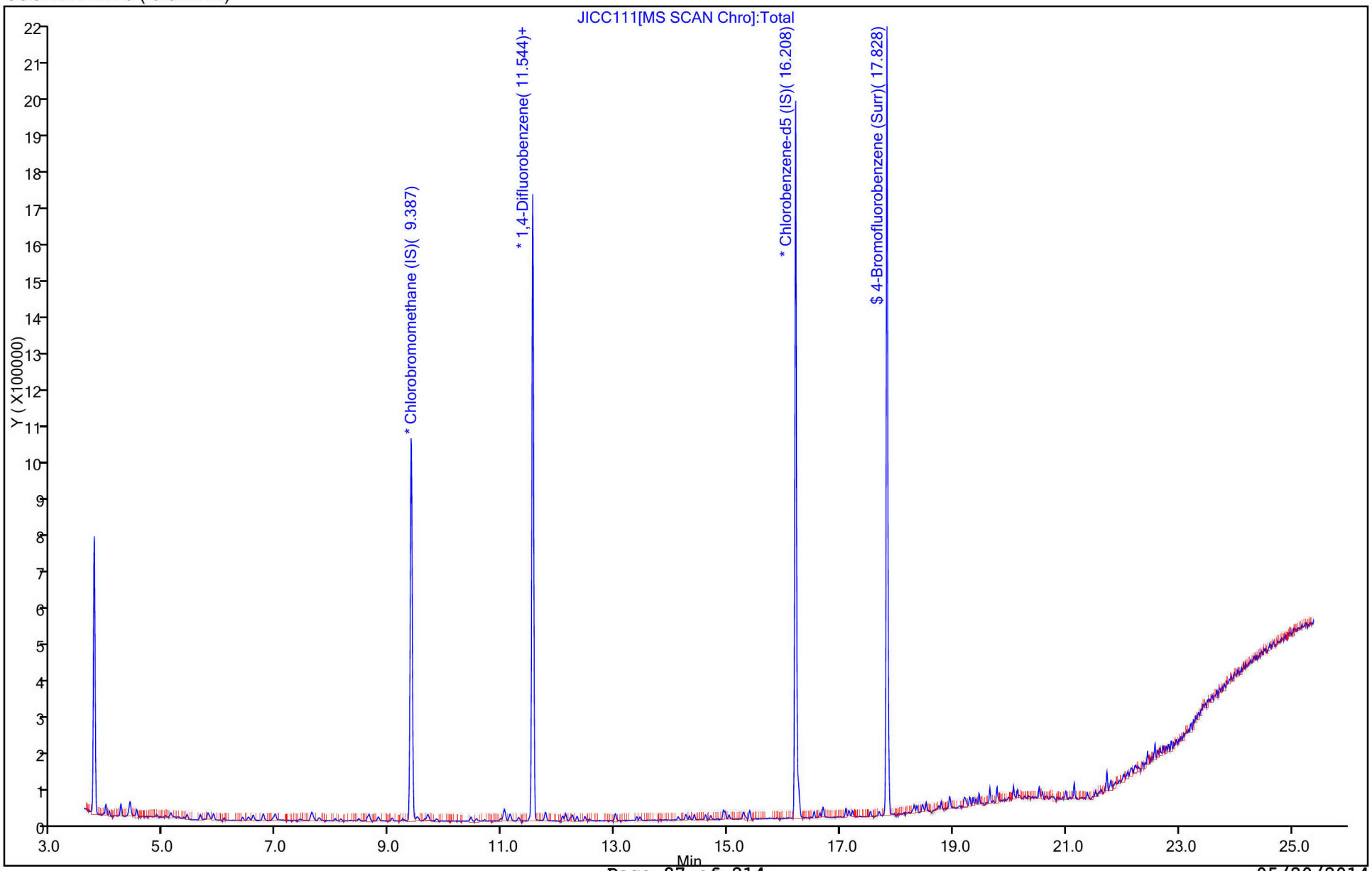
Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
84 1,2,3-Trichloropropane	110	17.688	17.690	-0.002	64	1802	0.0439	
85 Isopropylbenzene	105	17.795	17.793	0.002	80	15689	0.0526	
86 N-Propylbenzene	120	18.312	18.310	0.002	84	3351	0.0426	
87 2-Chlorotoluene	126	18.360	18.357	0.003	63	3868	0.0471	
88 4-Ethyltoluene	105	18.452	18.454	-0.002	79	14155	0.0509	
89 1,3,5-Trimethylbenzene	120	18.522	18.524	-0.002	80	6172	0.0441	
90 Alpha Methyl Styrene	118	18.747	18.745	0.002	51	4051	0.0404	
91 n-Decane	57	18.791	18.793	-0.003	58	7967	0.0465	
92 tert-Butylbenzene	119	18.936	18.937	-0.001	74	11758	0.0430	
93 1,2,4-Trimethylbenzene	105	18.947	18.949	-0.003	58	11073	0.0456	
94 sec-Butylbenzene	105	19.194	19.196	-0.002	87	16025	0.0450	
95 1,3-Dichlorobenzene	146	19.215	19.217	-0.002	64	7705	0.0483	
96 Benzyl chloride	91	19.291	19.288	0.003	77	9484	0.0523	
97 1,4-Dichlorobenzene	146	19.302	19.302	0.0	73	7264	0.0489	
98 4-Isopropyltoluene	119	19.350	19.352	-0.002	58	12622	0.0442	
99 1,2,3-Trimethylbenzene	105	19.409	19.409	0.0	64	10198	0.0516	
100 Butylcyclohexane	83	19.458	19.460	-0.002	82	10834	0.0480	
101 2,3-Dihydroindene	117	19.651	19.653	-0.002	82	11897	0.0536	
102 1,2-Dichlorobenzene	146	19.651	19.653	-0.002	62	7055	0.0452	
103 n-Butylbenzene	91	19.775	19.777	-0.002	83	11823	0.0446	
104 Indene	116	19.780	19.781	-0.001	71	9007	0.0465	
105 Undecane	57	20.071	20.068	0.003	79	8831	0.0512	
106 1,2-Dimethyl-4-Ethylbenzene	119	20.135	20.138	-0.003	67	12046	0.0450	
108 1,2,4,5-Tetramethylbenzene	119	20.528	20.525	0.003	80	14008	0.0521	
107 1,2,3,5-Tetramethylbenzene	119	20.582	20.582	0.0	69	8641	0.0492	
109 1,2,3,4-Tetramethylbenzene	119	20.996	20.998	-0.002	72	10802	0.0496	
110 Dodecane	57	21.147	21.148	-0.001	72	10350	0.0579	
111 1,2,4-Trichlorobenzene	180	21.378	21.379	-0.001	39	4076	0.0587	
112 Naphthalene	128	21.529	21.527	0.002	87	10827	0.0551	
113 Benzo(b)thiophene	134	21.631	21.631	0.0	65	9115	0.0684	
114 Hexachlorobutadiene	225	21.728	21.729	-0.001	66	8308	0.0586	
115 1,2,3-Trichlorobenzene	180	21.803	21.800	0.003	55	5282	0.0589	
116 2-Methylnaphthalene	142	22.449	22.449	0.0	79	9998	0.4781	
117 1-Methylnaphthalene	142	22.583	22.583	0.0	83	10034	0.4652	
139 Isopropyl ether	45	8.806	8.794	0.012	85	11786	NR	
142 Tert-butyl ethyl ether	59	9.500	9.487	0.013	66	10168	NR	
140 Tert-amyl methyl ether	73	11.496	11.482	0.014	50	9463	NR	
A 118 C6 Range	1	8.639	8.596 -	8.682	0	71508	0.0675	
A 122 Toluene Range	1	14.261	14.231 -	14.291	0	31251	0.0553	
A 123 C8 Range	1	14.928	14.896 -	14.960	0	84643	0.0967	
S 124 Xylenes, Total	100				0		0.1629	

Report Date: 14-Mar-2014 14:46:12 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC111.D				
Injection Date:	11-Mar-2014 12:40:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L1	Lab Sample ID:		Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



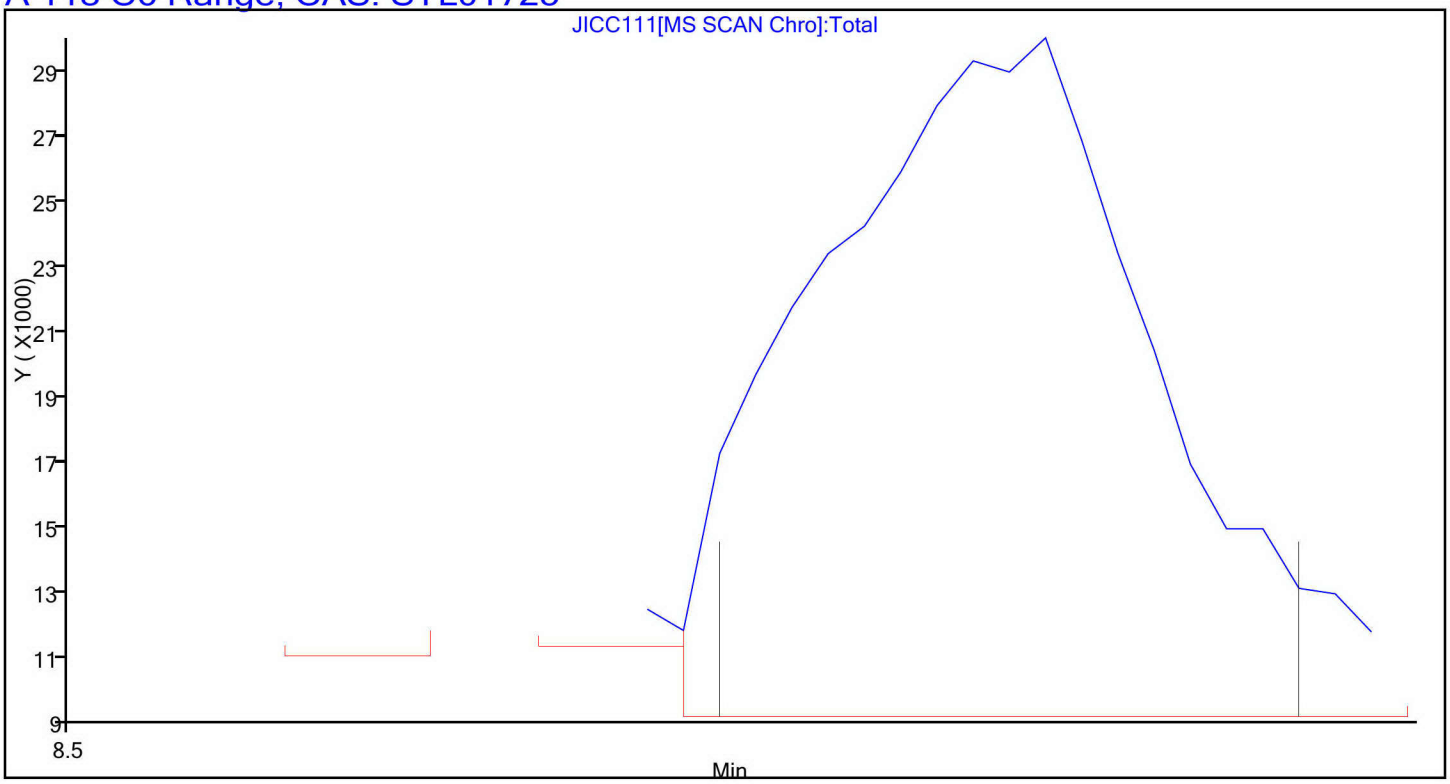
Report Date: 14-Mar-2014 14:46:12 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC111.D				
Injection Date:	11-Mar-2014 12:40:30	Instrument ID:	MJ		
Lims ID:	IC L1	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725



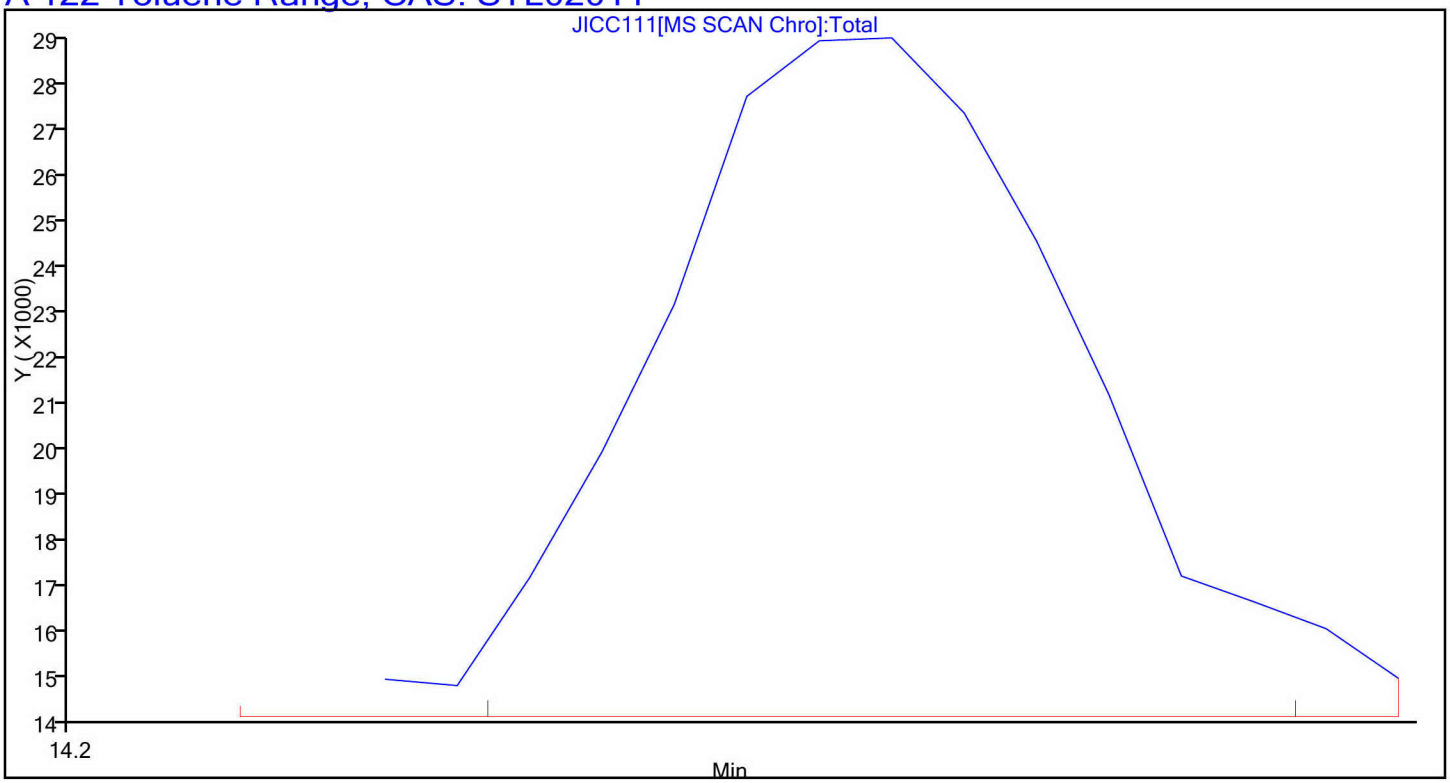
Report Date: 14-Mar-2014 14:46:12 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC111.D				
Injection Date:	11-Mar-2014 12:40:30	Instrument ID:	MJ		
Lims ID:	IC L1	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 Toluene Range, CAS: STL02011



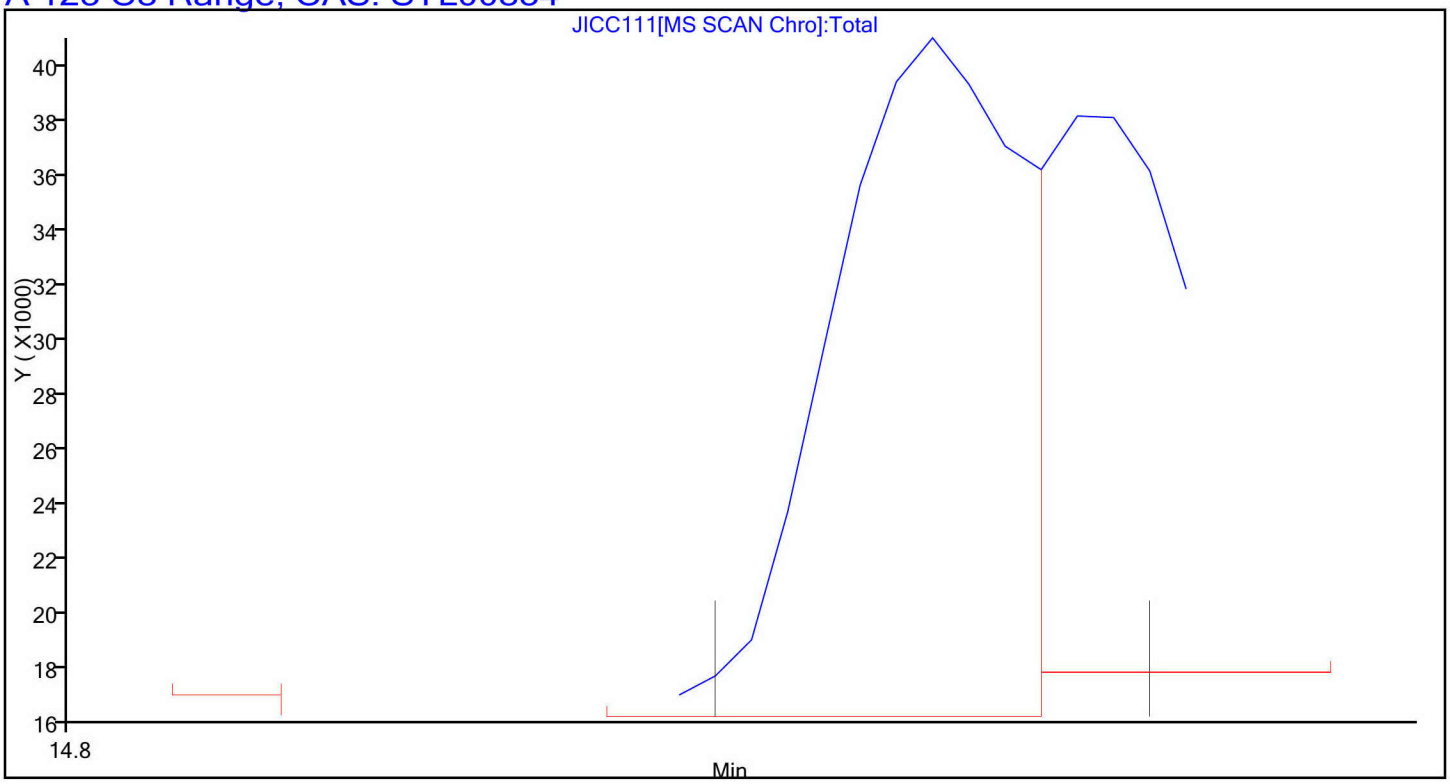
Report Date: 14-Mar-2014 14:46:12 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC111.D				
Injection Date:	11-Mar-2014 12:40:30	Instrument ID:	MJ		
Lims ID:	IC L1	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 123 C8 Range, CAS: STL00834



May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC112.D
Lims ID: IC L2 Lab Sample ID:
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 11-Mar-2014 13:35:30 ALS Bottle#: 8 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: ICAL2,,1,2,,ICAL 0.08
Misc. Info.: J031114I,TO15,,140-0000516-003
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub3

Method: \\KNXCHROM\ChromData\MJ\20140311-516.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Mar-2014 14:45:57 Calib Date: 11-Mar-2014 19:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 14-Mar-2014 14:45:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.387	9.392	-0.005	92	351959	4.00	
* 2 1,4-Difluorobenzene	114	11.544	11.547	-0.003	94	1697921	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.208	16.208	0.0	87	1421637	4.00	
$ 5 4-Bromofluorobenzene (Surr)	95	17.822	17.825	-0.003	90	985783	3.92	
6 Chlorodifluoromethane	67	3.965	3.960	0.004	90	3504	0.0965	
7 Propene	41	3.975	3.973	0.002	98	12138	0.1125	
8 Dichlorodifluoromethane	85	4.029	4.029	0.0	95	29444	0.0845	
9 Chloromethane	52	4.228	4.230	-0.002	90	3561	0.0899	
10 1,2-Dichloro-1,1,2,2-tetrafluoro	135	4.239	4.238	0.001	88	20686	0.0786	
11 Acetaldehyde	44	4.400	4.398	0.002	99	45343	1.31	
12 Vinyl chloride	62	4.416	4.419	-0.003	67	10730	0.0822	
14 Butadiene	54	4.519	4.517	0.002	58	7941	0.0876	
13 Butane	43	4.519	4.517	0.002	87	17319	0.0933	
15 Bromomethane	94	4.868	4.871	-0.003	88	11324	0.0853	
16 Chloroethane	64	5.030	5.027	0.003	66	4956	0.0826	
17 Ethanol	31	5.126	5.122	0.004	94	18689	0.6614	
18 Vinyl bromide	106	5.358	5.357	0.001	72	9051	0.0802	
19 2-Methylbutane	43	5.412	5.411	0.001	85	14009	0.0937	
20 Trichlorofluoromethane	101	5.648	5.647	0.001	87	24616	0.0804	
21 Acrolein	56	5.648	5.650	-0.002	1	2906	0.1011	
22 Acetonitrile	40	5.729	5.720	0.009	91	2885	0.0909	
23 Acetone	58	5.788	5.776	0.012	83	21741	0.4346	
24 Isopropyl alcohol	45	5.863	5.858	0.005	57	14698	0.1113	
25 Pentane	72	5.885	5.884	0.001	84	1358	0.0717	
26 Ethyl ether	31	6.068	6.059	0.009	82	8583	0.0932	
27 1,1-Dichloroethene	96	6.396	6.399	-0.003	81	7963	0.0806	
28 2-Methyl-2-propanol	59	6.504	6.487	0.017	75	15116	0.0929	
29 Acrylonitrile	53	6.498	6.498	0.0	40	4249	0.0812	
30 1,1,2-Trichloro-1,2,2-trifluoroe	101	6.584	6.586	-0.002	83	17027	0.0802	
31 Methylene Chloride	84	6.756	6.759	-0.003	91	10876	0.1155	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.778	6.778	0.0	80	9954	0.1016	
33 Carbon disulfide	76	6.939	6.942	-0.003	98	26783	0.0809	
34 trans-1,2-Dichloroethene	96	7.606	7.609	-0.003	85	9917	0.0833	
35 2-Methylpentane	43	7.628	7.631	-0.003	86	23860	0.0879	
36 Methyl tert-butyl ether	73	7.752	7.738	0.014	84	15796	0.0879	
37 1,1-Dichloroethane	63	8.042	8.041	0.001	65	15825	0.0852	
38 Vinyl acetate	43	8.144	8.141	0.003	99	14224	0.0874	
39 2-Butanone (MEK)	72	8.612	8.601	0.011	91	4259	0.1278	
40 Hexane	56	8.645	8.642	0.003	85	8251	0.0872	
41 cis-1,2-Dichloroethene	96	9.048	9.052	-0.004	67	8788	0.0865	
42 Ethyl acetate	43	9.236	9.229	0.007	83	13104	0.0903	
43 Chloroform	83	9.398	9.403	-0.005	15	17711	0.0864	
44 Tetrahydrofuran	42	9.833	9.816	0.017	89	7748	0.0950	
45 1,1,1-Trichloroethane	97	10.452	10.450	0.002	78	18227	0.0853	
46 1,2-Dichloroethane	62	10.544	10.547	-0.003	63	11010	0.0836	
47 n-Butanol	31	10.974	10.958	0.016	72	4071	0.1097	
48 Benzene	78	11.033	11.033	0.0	92	26808	0.0920	
49 Cyclohexane	69	11.038	11.040	-0.002	83	4766	0.0829	
50 Carbon tetrachloride	117	11.055	11.059	-0.004	87	18074	0.0751	
51 2,3-Dimethylpentane	71	11.146	11.148	-0.002	82	5679	0.0826	
52 Thiophene	84	11.291	11.297	-0.006	67	15107	0.0840	
53 Isooctane	57	11.770	11.771	-0.001	91	43691	0.0878	
54 n-Heptane	71	12.131	12.130	0.001	80	8567	0.0832	
55 1,2-Dichloropropane	63	12.211	12.214	-0.003	69	8407	0.0854	
56 Trichloroethene	130	12.249	12.252	-0.003	73	11412	0.0807	
57 Dibromomethane	93	12.330	12.332	-0.002	84	10647	0.0822	
59 Dichlorobromomethane	83	12.469	12.472	-0.003	79	16281	0.0792	
58 1,4-Dioxane	88	12.496	12.483	0.013	55	2681	0.0760	
60 Methyl methacrylate	41	12.550	12.548	0.002	49	7159	0.0810	
61 Methylcyclohexane	83	13.013	13.013	0.0	88	16589	0.0846	
62 4-Methyl-2-pentanone (MIBK)	43	13.384	13.382	0.002	83	13754	0.0773	
63 cis-1,3-Dichloropropene	75	13.448	13.448	0.0	68	11409	0.0817	
64 trans-1,3-Dichloropropene	75	14.126	14.126	0.0	67	9630	0.0817	
65 Toluene	91	14.261	14.262	-0.001	79	23320	0.0884	
66 1,1,2-Trichloroethane	83	14.325	14.328	-0.003	76	7143	0.0855	
67 2-Methylthiophene	97	14.411	14.413	-0.002	76	20765	0.0876	
68 3-Methylthiophene	97	14.610	14.612	-0.002	72	20169	0.0848	
69 2-Hexanone	58	14.691	14.694	-0.003	77	6711	0.0777	
70 n-Octane	85	14.928	14.928	0.0	90	8228	0.0850	
71 Chlorodibromomethane	129	15.025	15.027	-0.002	71	12900	0.0699	
72 Ethylene Dibromide	107	15.315	15.317	-0.002	75	11550	0.0806	
73 Tetrachloroethene	129	15.390	15.393	-0.003	82	10252	0.0834	
75 Chlorobenzene	112	16.257	16.256	0.001	30	18101	0.0803	
74 2,3-Dimethylheptane	43	16.257	16.260	-0.003	93	28479	0.0981	
76 Ethylbenzene	91	16.536	16.536	0.0	83	24423	0.0838	
77 2-Ethylthiophene	97	16.639	16.638	0.001	51	18507	0.0811	
78 m-Xylene & p-Xylene	91	16.692	16.696	-0.004	95	36838	0.1567	
79 n-Nonane	57	17.096	17.098	-0.002	89	14980	0.0819	
81 Bromoform	173	17.150	17.149	0.001	64	8612	0.0591	
80 Styrene	104	17.155	17.157	-0.002	78	10790	0.0668	
82 o-Xylene	91	17.220	17.220	0.0	84	19871	0.0834	
83 1,1,2,2-Tetrachloroethane	83	17.532	17.534	-0.002	77	14012	0.0720	

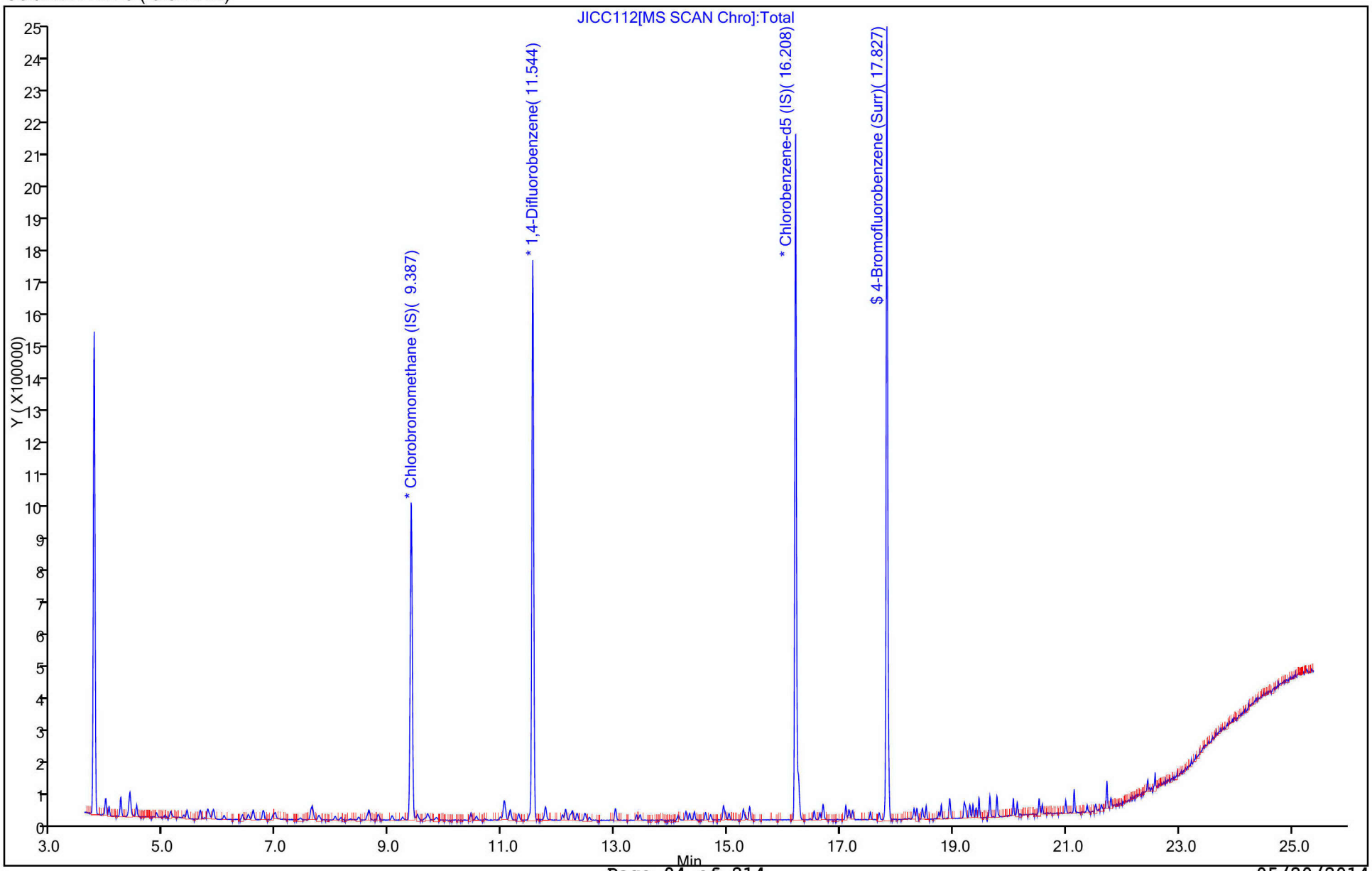
Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
84 1,2,3-Trichloropropane	110	17.688	17.690	-0.002	73	3358	0.0719	
85 Isopropylbenzene	105	17.790	17.793	-0.003	83	28138	0.0829	
86 N-Propylbenzene	120	18.312	18.310	0.002	90	6000	0.0670	
87 2-Chlorotoluene	126	18.355	18.357	-0.002	77	7042	0.0754	
88 4-Ethyltoluene	105	18.451	18.454	-0.003	85	23930	0.0756	
89 1,3,5-Trimethylbenzene	120	18.521	18.524	-0.003	84	11546	0.0725	
90 Alpha Methyl Styrene	118	18.747	18.745	0.002	64	6489	0.0569	
91 n-Decane	57	18.790	18.793	-0.003	77	14539	0.0746	
92 tert-Butylbenzene	119	18.936	18.937	-0.001	81	22994	0.0740	
93 1,2,4-Trimethylbenzene	105	18.946	18.949	-0.003	77	19426	0.0704	
94 sec-Butylbenzene	105	19.194	19.196	-0.002	89	29629	0.0731	
95 1,3-Dichlorobenzene	146	19.215	19.217	-0.002	83	13041	0.0719	
96 Benzyl chloride	91	19.285	19.288	-0.003	82	14954	0.0725	
97 1,4-Dichlorobenzene	146	19.301	19.302	-0.001	83	12015	0.0711	
98 4-Isopropyltoluene	119	19.350	19.352	-0.002	71	22915	0.0705	
99 1,2,3-Trimethylbenzene	105	19.409	19.409	0.0	82	17168	0.0763	
100 Butylcyclohexane	83	19.457	19.460	-0.003	86	21401	0.0833	
101 2,3-Dihydroindene	117	19.651	19.653	-0.002	81	18631	0.0739	
102 1,2-Dichlorobenzene	146	19.651	19.653	-0.002	71	12220	0.0688	
103 n-Butylbenzene	91	19.775	19.777	-0.002	90	21249	0.0705	
104 Indene	116	19.780	19.781	-0.001	81	14683	0.0666	
105 Undecane	57	20.065	20.068	-0.003	86	15935	0.0811	
106 1,2-Dimethyl-4-Ethylbenzene	119	20.141	20.138	0.003	74	21750	0.0714	
108 1,2,4,5-Tetramethylbenzene	119	20.523	20.525	-0.003	87	24071	0.0787	
107 1,2,3,5-Tetramethylbenzene	119	20.582	20.582	0.0	81	16306	0.0816	
109 1,2,3,4-Tetramethylbenzene	119	20.996	20.998	-0.002	84	21613	0.0873	
110 Dodecane	57	21.147	21.148	-0.001	75	17682	0.0870	
111 1,2,4-Trichlorobenzene	180	21.378	21.379	-0.001	57	6805	0.0862	
112 Naphthalene	128	21.528	21.527	0.001	92	17213	0.0769	
113 Benzo(b)thiophene	134	21.631	21.631	0.0	76	12541	0.0827	
114 Hexachlorobutadiene	225	21.728	21.729	-0.001	77	13588	0.0842	
115 1,2,3-Trichlorobenzene	180	21.797	21.800	-0.003	70	8385	0.0822	
116 2-Methylnaphthalene	142	22.448	22.449	-0.001	82	13381	0.5625	
117 1-Methylnaphthalene	142	22.583	22.583	0.0	86	14503	0.5912	
139 Isopropyl ether	45	8.801	8.794	0.007	90	21937	NR	
142 Tert-butyl ethyl ether	59	9.495	9.487	0.008	79	18395	NR	
140 Tert-amyl methyl ether	73	11.490	11.482	0.008	68	17787	NR	
A 118 C6 Range	1	8.639	8.596 -	8.682	0	106564	0.1037	
A 122 Toluene Range	1	14.261	14.231 -	14.291	0	53595	0.0834	
A 123 C8 Range	1	14.928	14.896 -	14.960	0	128220	0.1287	
S 124 Xylenes, Total	100				0		0.2401	

Report Date: 14-Mar-2014 14:45:58 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC112.D				
Injection Date:	11-Mar-2014 13:35:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L2	Lab Sample ID:		Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



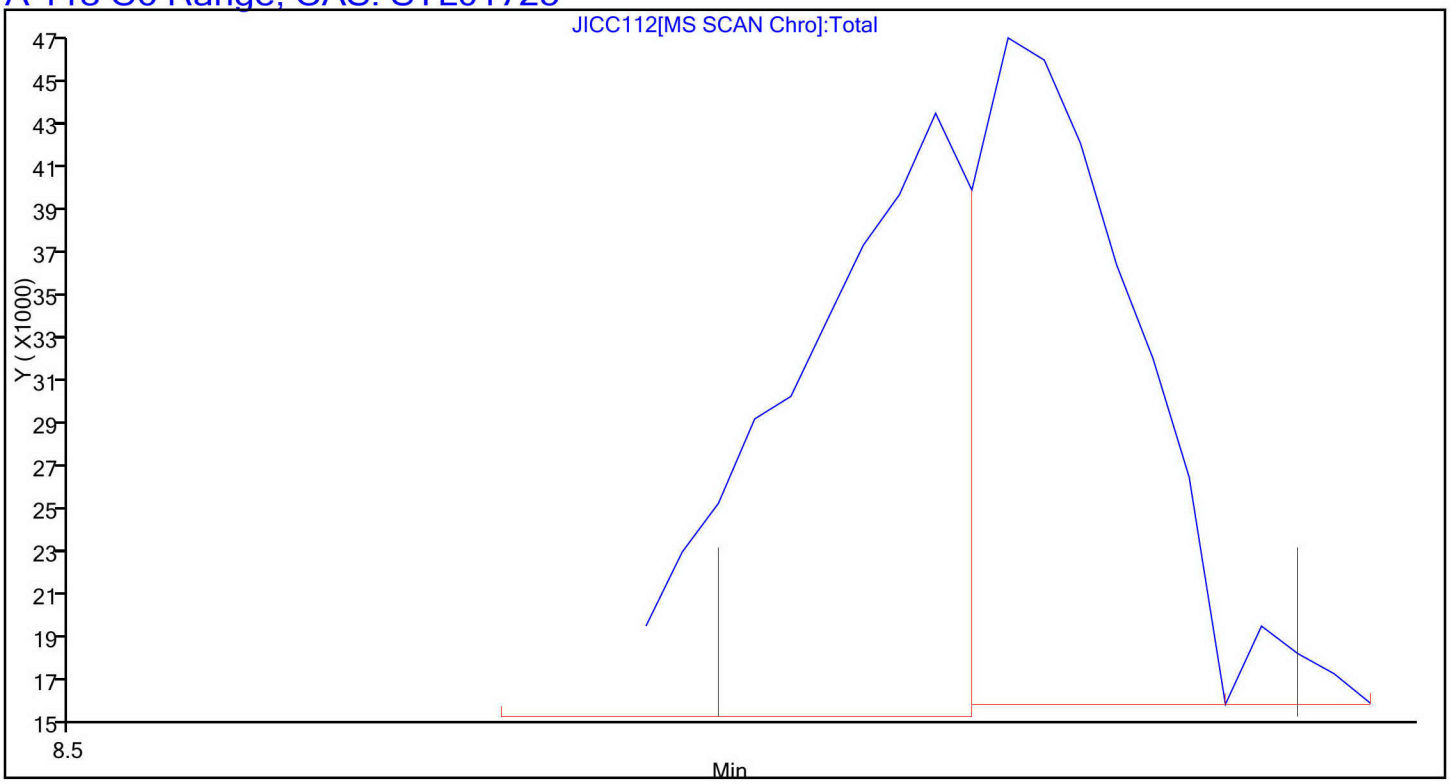
Report Date: 14-Mar-2014 14:45:58 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC112.D				
Injection Date:	11-Mar-2014 13:35:30	Instrument ID:	MJ		
Lims ID:	IC L2	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725



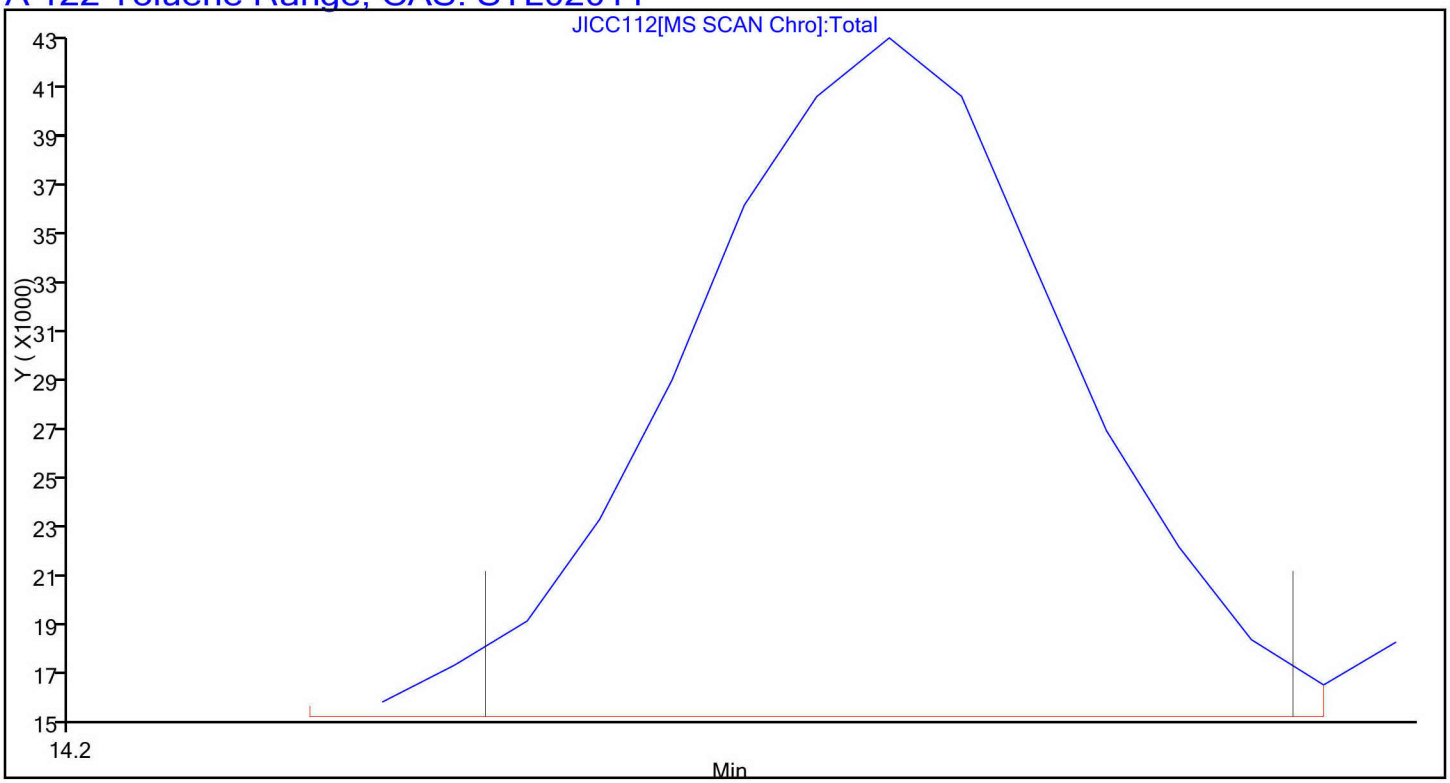
Report Date: 14-Mar-2014 14:45:58 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC112.D				
Injection Date:	11-Mar-2014 13:35:30	Instrument ID:	MJ		
Lims ID:	IC L2	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 Toluene Range, CAS: STL02011



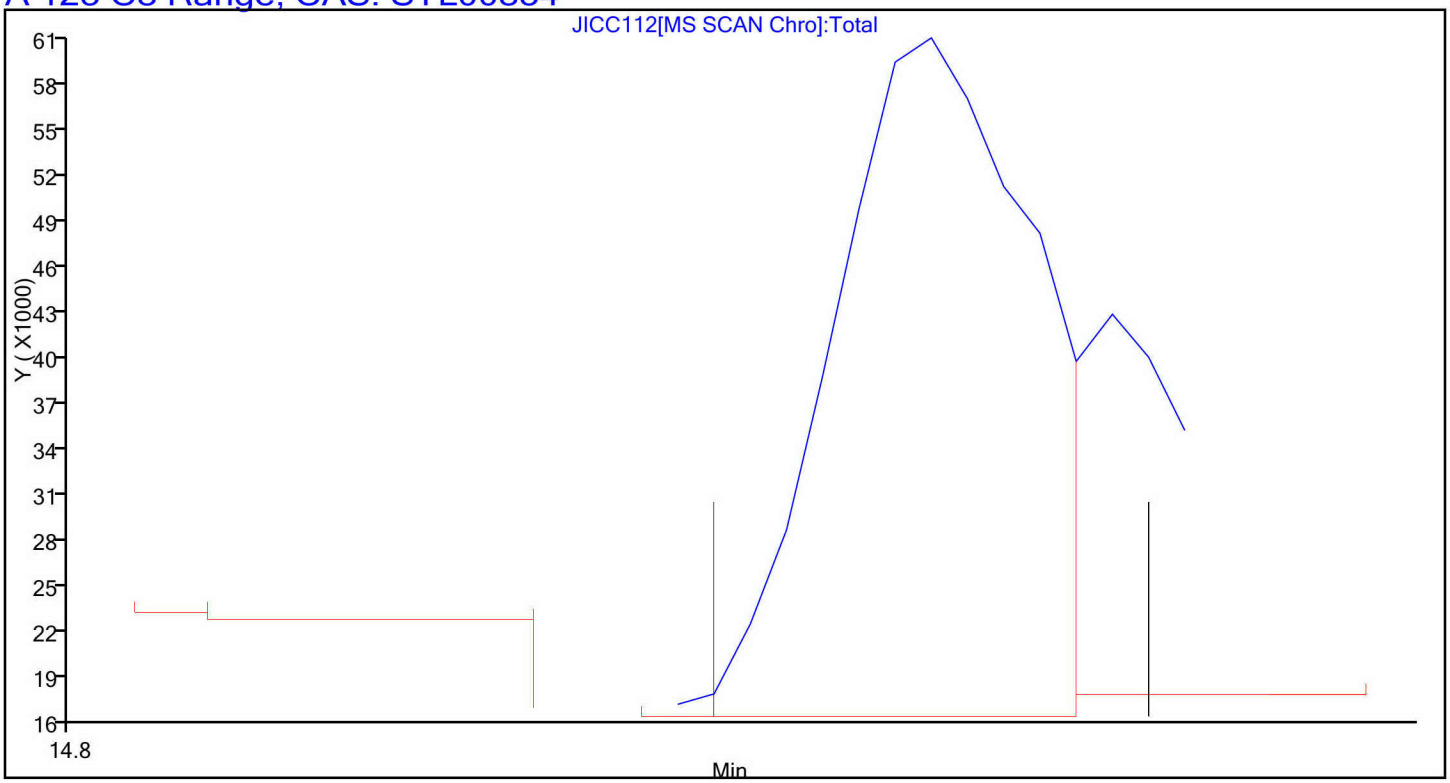
Report Date: 14-Mar-2014 14:45:58 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC112.D				
Injection Date:	11-Mar-2014 13:35:30	Instrument ID:	MJ		
Lims ID:	IC L2	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 123 C8 Range, CAS: STL00834



May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC113.D
Lims ID: IC L3 Lab Sample ID: Client 140-535/4-A
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 11-Mar-2014 14:29:30 ALS Bottle#: 9 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: ICAL3,,1,3,,ICAL 0.16
Misc. Info.: J031114I,TO15,,140-0000516-004
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub3

Method: \\KNXCHROM\ChromData\MJ\20140311-516.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Mar-2014 14:45:45 Calib Date: 11-Mar-2014 19:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 14-Mar-2014 14:45:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.388	9.392	-0.004	91	357314	4.00	
* 2 1,4-Difluorobenzene	114	11.545	11.547	-0.002	94	1704540	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.204	16.208	-0.004	87	1450555	4.00	
$ 5 4-Bromofluorobenzene (Surr)	95	17.823	17.825	-0.002	90	1034797	4.03	
6 Chlorodifluoromethane	67	3.955	3.960	-0.005	92	7250	0.1966	
7 Propene	41	3.971	3.973	-0.002	99	22123	0.2019	
8 Dichlorodifluoromethane	85	4.025	4.029	-0.004	100	63957	0.1807	
9 Chloromethane	52	4.224	4.230	-0.006	60	7684	0.1911	
10 1,2-Dichloro-1,1,2,2-tetrafluoro	135	4.234	4.238	-0.004	90	47157	0.1765	
11 Acetaldehyde	44	4.396	4.398	-0.002	98	35881	1.02	
12 Vinyl chloride	62	4.417	4.419	-0.002	87	24848	0.1876	
14 Butadiene	54	4.514	4.517	-0.003	85	17011	0.1848	
13 Butane	43	4.514	4.517	-0.003	87	35698	0.1894	
15 Bromomethane	94	4.869	4.871	-0.002	92	24480	0.1817	
16 Chloroethane	64	5.025	5.027	-0.002	78	11208	0.1839	
17 Ethanol	31	5.117	5.122	-0.005	94	27045	0.9428	
18 Vinyl bromide	106	5.353	5.357	-0.004	93	20665	0.1804	
19 2-Methylbutane	43	5.407	5.411	-0.004	93	29844	0.1967	
20 Trichlorofluoromethane	101	5.644	5.647	-0.003	96	56802	0.1827	
21 Acrolein	56	5.655	5.650	0.005	6	5224	0.1791	
22 Acetonitrile	40	5.719	5.720	-0.001	95	6174	0.1916	
23 Acetone	58	5.778	5.776	0.002	83	15375	0.3027	
24 Isopropyl alcohol	45	5.859	5.858	0.001	69	24457	0.1824	
25 Pentane	72	5.880	5.884	-0.004	93	3459	0.1799	
26 Ethyl ether	31	6.058	6.059	-0.001	88	17680	0.1891	
27 1,1-Dichloroethene	96	6.392	6.399	-0.007	94	17971	0.1791	
28 2-Methyl-2-propanol	59	6.488	6.487	0.001	91	30258	0.1831	
29 Acrylonitrile	53	6.499	6.498	0.001	44	9278	0.1747	
30 1,1,2-Trichloro-1,2,2-trifluoroe	101	6.585	6.586	-0.001	90	38956	0.1808	
31 Methylene Chloride	84	6.757	6.759	-0.002	93	19809	0.2072	

May 23, 2014

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.768	6.778	-0.010	90	20200	0.2032	
33 Carbon disulfide	76	6.940	6.942	-0.002	97	61892	0.1841	
34 trans-1,2-Dichloroethene	96	7.607	7.609	-0.002	95	21641	0.1791	
35 2-Methylpentane	43	7.629	7.631	-0.002	93	51760	0.1877	
36 Methyl tert-butyl ether	73	7.742	7.738	0.004	93	33243	0.1823	
37 1,1-Dichloroethane	63	8.038	8.041	-0.003	90	36976	0.1961	
38 Vinyl acetate	43	8.140	8.141	-0.001	98	29176	0.1766	
39 2-Butanone (MEK)	72	8.608	8.601	0.007	94	5876	0.1737	
40 Hexane	56	8.635	8.642	-0.007	89	18317	0.1907	
41 cis-1,2-Dichloroethene	96	9.049	9.052	-0.003	85	20156	0.1954	
42 Ethyl acetate	43	9.227	9.229	-0.003	94	26903	0.1826	
43 Chloroform	83	9.399	9.403	-0.004	67	40765	0.1958	
44 Tetrahydrofuran	42	9.818	9.816	0.002	89	15807	0.1910	
45 1,1,1-Trichloroethane	97	10.448	10.450	-0.002	90	42198	0.1945	
46 1,2-Dichloroethane	62	10.544	10.547	-0.003	86	23652	0.1789	
47 n-Butanol	31	10.964	10.958	0.006	76	8551	0.2295	
48 Benzene	78	11.029	11.033	-0.004	95	53761	0.1838	
49 Cyclohexane	69	11.034	11.040	-0.006	89	10543	0.1827	
50 Carbon tetrachloride	117	11.056	11.059	-0.003	94	43678	0.1808	
51 2,3-Dimethylpentane	71	11.147	11.148	-0.001	88	12974	0.1880	
52 Thiophene	84	11.292	11.297	-0.005	92	34350	0.1902	
53 Isooctane	57	11.766	11.771	-0.005	97	97042	0.1943	
54 n-Heptane	71	12.126	12.130	-0.004	86	19608	0.1896	
55 1,2-Dichloropropane	63	12.212	12.214	-0.002	80	16678	0.1687	
56 Trichloroethene	130	12.250	12.252	-0.002	90	26470	0.1866	
57 Dibromomethane	93	12.330	12.332	-0.002	88	23612	0.1815	
59 Dichlorobromomethane	83	12.470	12.472	-0.002	93	35477	0.1719	
58 1,4-Dioxane	88	12.492	12.483	0.009	69	5872	0.1658	
60 Methyl methacrylate	41	12.546	12.548	-0.002	74	14809	0.1670	
61 Methylcyclohexane	83	13.014	13.013	0.001	94	37072	0.1883	
62 4-Methyl-2-pentanone (MIBK)	43	13.385	13.382	0.003	88	25379	0.1420	
63 cis-1,3-Dichloropropene	75	13.449	13.448	0.001	85	22640	0.1614	
64 trans-1,3-Dichloropropene	75	14.122	14.126	-0.004	83	20295	0.1688	
65 Toluene	91	14.262	14.262	0.0	91	47832	0.1778	
66 1,1,2-Trichloroethane	83	14.326	14.328	-0.002	91	14877	0.1744	
67 2-Methylthiophene	97	14.412	14.413	-0.001	91	42390	0.1753	
68 3-Methylthiophene	97	14.611	14.612	-0.001	86	42847	0.1766	
69 2-Hexanone	58	14.697	14.694	0.003	82	12124	0.1376	
70 n-Octane	85	14.929	14.928	0.001	90	17415	0.1764	
71 Chlorodibromomethane	129	15.026	15.027	-0.001	88	28336	0.1505	
72 Ethylene Dibromide	107	15.316	15.317	-0.001	80	24689	0.1689	
73 Tetrachloroethene	129	15.391	15.393	-0.002	85	22395	0.1786	
75 Chlorobenzene	112	16.252	16.256	-0.004	75	38702	0.1684	
74 2,3-Dimethylheptane	43	16.257	16.260	-0.003	94	53631	0.1810	
76 Ethylbenzene	91	16.532	16.536	-0.004	91	53929	0.1814	
77 2-Ethylthiophene	97	16.639	16.638	0.001	84	41218	0.1769	
78 m-Xylene & p-Xylene	91	16.693	16.696	-0.003	100	83497	0.3481	
79 n-Nonane	57	17.097	17.098	-0.001	91	29027	0.1555	
81 Bromoform	173	17.145	17.149	-0.004	80	19445	0.1308	
80 Styrene	104	17.156	17.157	-0.001	89	24244	0.1472	
82 o-Xylene	91	17.220	17.220	0.0	89	45016	0.1851	
83 1,1,2,2-Tetrachloroethane	83	17.532	17.534	-0.002	94	30304	0.1525	

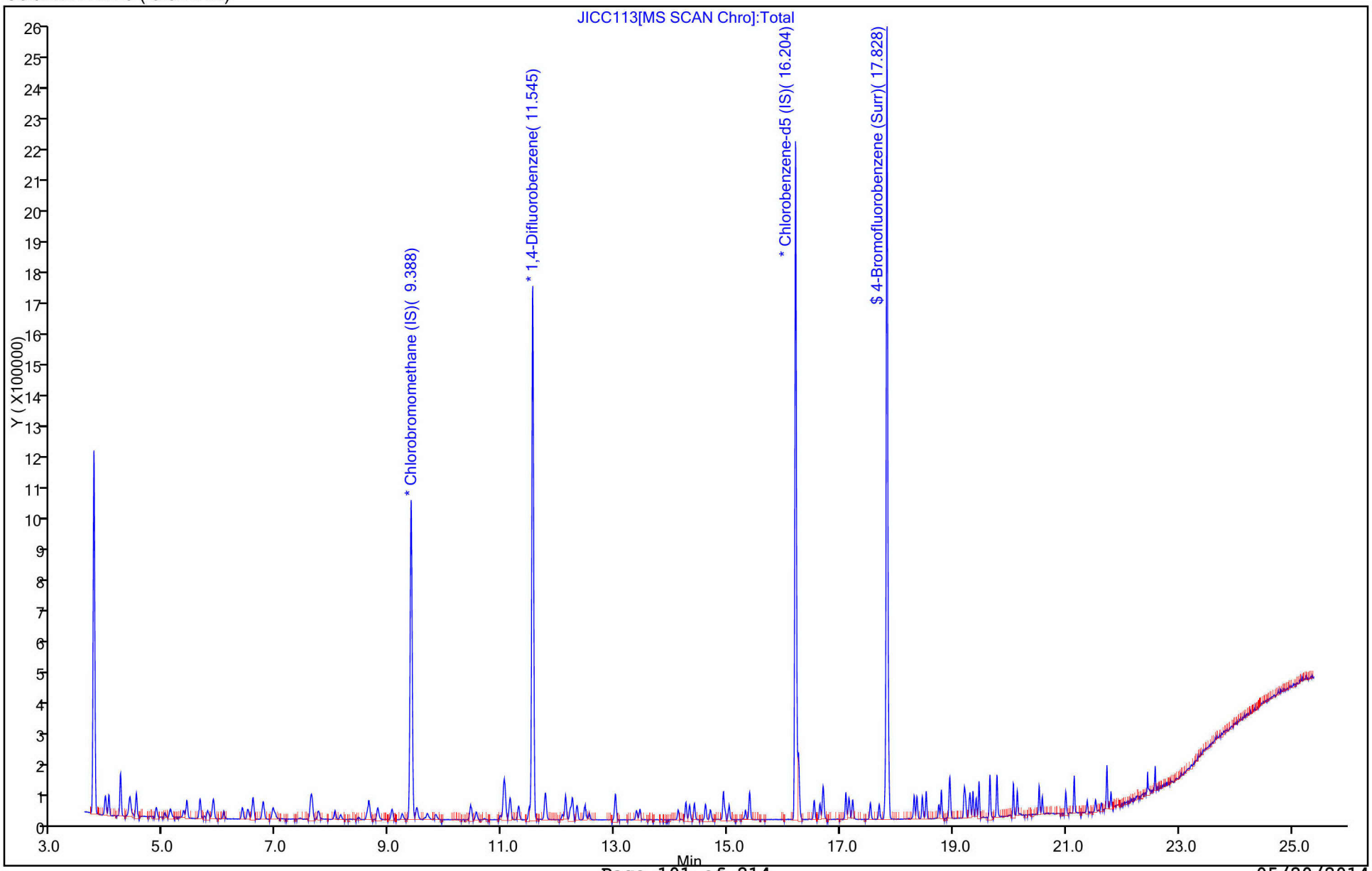
Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
84 1,2,3-Trichloropropane	110	17.694	17.690	0.004	90	7573	0.1590	
85 Isopropylbenzene	105	17.791	17.793	-0.002	86	60842	0.1756	
86 N-Propylbenzene	120	18.312	18.310	0.002	96	14173	0.1551	
87 2-Chlorotoluene	126	18.355	18.357	-0.002	89	15581	0.1634	
88 4-Ethyltoluene	105	18.452	18.454	-0.002	94	51618	0.1598	
89 1,3,5-Trimethylbenzene	120	18.522	18.524	-0.002	89	24966	0.1537	
90 Alpha Methyl Styrene	118	18.743	18.745	-0.002	78	14480	0.1244	
91 n-Decane	57	18.791	18.793	-0.002	86	30213	0.1519	
92 tert-Butylbenzene	119	18.936	18.937	-0.001	87	47790	0.1507	
93 1,2,4-Trimethylbenzene	105	18.947	18.949	-0.002	86	41818	0.1484	
94 sec-Butylbenzene	105	19.195	19.196	-0.001	95	61653	0.1491	
95 1,3-Dichlorobenzene	146	19.216	19.217	-0.001	94	26725	0.1443	
96 Benzyl chloride	91	19.286	19.288	-0.002	95	30711	0.1460	
97 1,4-Dichlorobenzene	146	19.302	19.302	0.0	89	24804	0.1439	
98 4-Isopropyltoluene	119	19.351	19.352	-0.001	80	47097	0.1421	
99 1,2,3-Trimethylbenzene	105	19.410	19.409	0.001	91	35544	0.1548	
100 Butylcyclohexane	83	19.458	19.460	-0.002	89	39782	0.1518	
101 2,3-Dihydroindene	117	19.652	19.653	-0.001	87	37844	0.1470	
102 1,2-Dichlorobenzene	146	19.652	19.653	-0.001	79	25655	0.1417	
103 n-Butylbenzene	91	19.776	19.777	-0.001	94	44913	0.1460	
104 Indene	116	19.781	19.781	0.0	83	31046	0.1380	
105 Undecane	57	20.066	20.068	-0.002	92	30780	0.1536	
106 1,2-Dimethyl-4-Ethylbenzene	119	20.136	20.138	-0.002	91	42402	0.1364	
108 1,2,4,5-Tetramethylbenzene	119	20.523	20.525	-0.002	93	45438	0.1455	
107 1,2,3,5-Tetramethylbenzene	119	20.583	20.582	0.001	89	30265	0.1485	
109 1,2,3,4-Tetramethylbenzene	119	20.997	20.998	-0.001	89	37074	0.1468	
110 Dodecane	57	21.147	21.148	-0.001	89	33803	0.1629	
111 1,2,4-Trichlorobenzene	180	21.379	21.379	0.0	74	10877	0.1350	
112 Naphthalene	128	21.524	21.527	-0.003	95	30193	0.1323	
113 Benzo(b)thiophene	134	21.632	21.631	0.001	80	19240	0.1244	
114 Hexachlorobutadiene	225	21.728	21.729	-0.001	79	23861	0.1449	
115 1,2,3-Trichlorobenzene	180	21.798	21.800	-0.002	85	14621	0.1404	
116 2-Methylnaphthalene	142	22.449	22.449	0.0	89	21725	0.8950	
117 1-Methylnaphthalene	142	22.584	22.583	0.001	92	25220	1.01	
139 Isopropyl ether	45	8.796	8.794	0.002	93	44609	NR	
142 Tert-butyl ethyl ether	59	9.485	9.487	-0.002	93	40755	NR	
140 Tert-amyl methyl ether	73	11.486	11.482	0.004	74	38761	NR	
A 118 C6 Range	1	8.640	8.586 -	8.694	0	202396	0.1940	
A 122 Toluene Range	1	14.262	14.232 -	14.292	0	134690	0.2054	
A 123 C8 Range	1	14.923	14.886 -	14.961	0	242838	0.2390	
S 124 Xylenes, Total	100				0		0.5333	

Report Date: 14-Mar-2014 14:45:46 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC113.D				
Injection Date:	11-Mar-2014 14:29:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L3	Lab Sample ID:	Client 140-535/4-A	Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



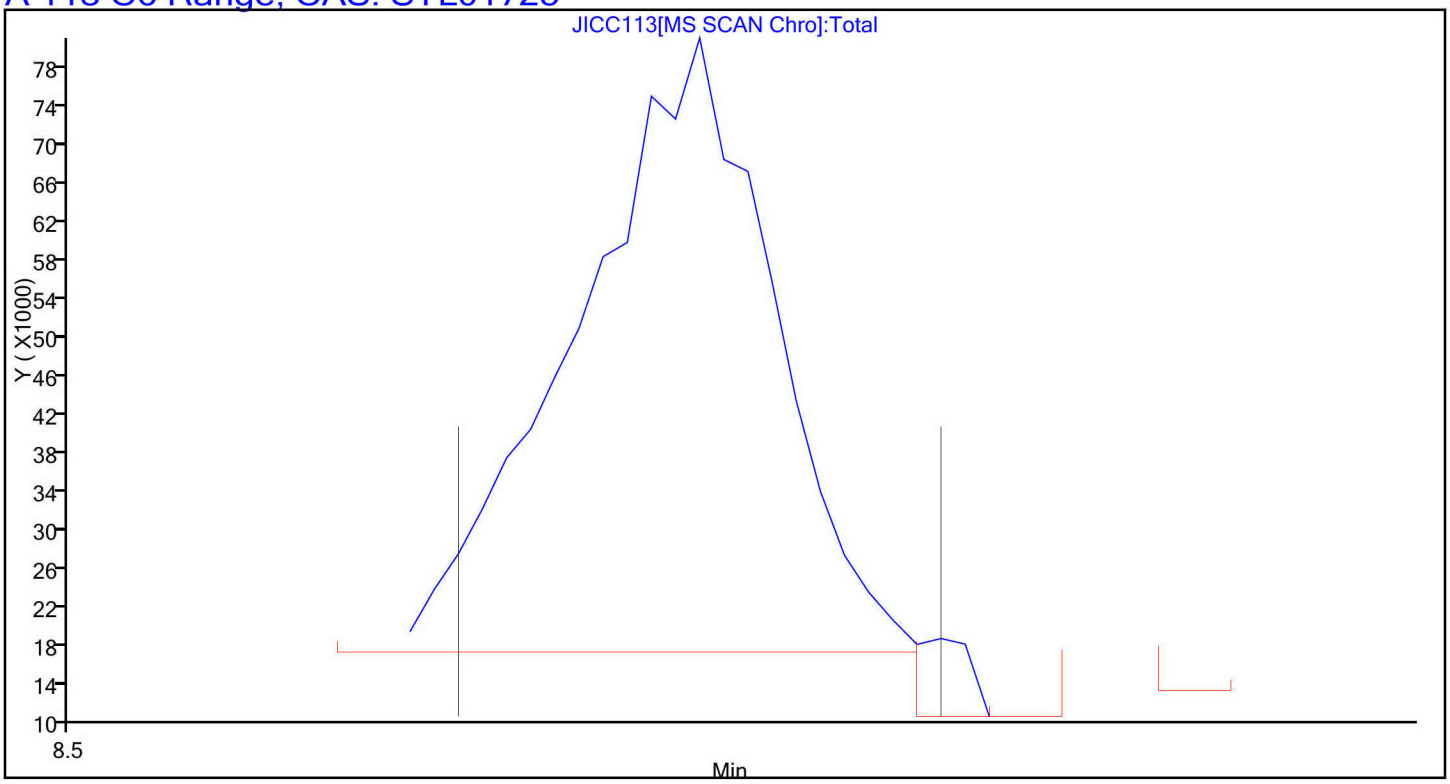
Report Date: 14-Mar-2014 14:45:46 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC113.D				
Injection Date:	11-Mar-2014 14:29:30	Instrument ID:	MJ		
Lims ID:	IC L3	Lab Sample ID:	Client 140-535/4-A		
Client ID:					
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725



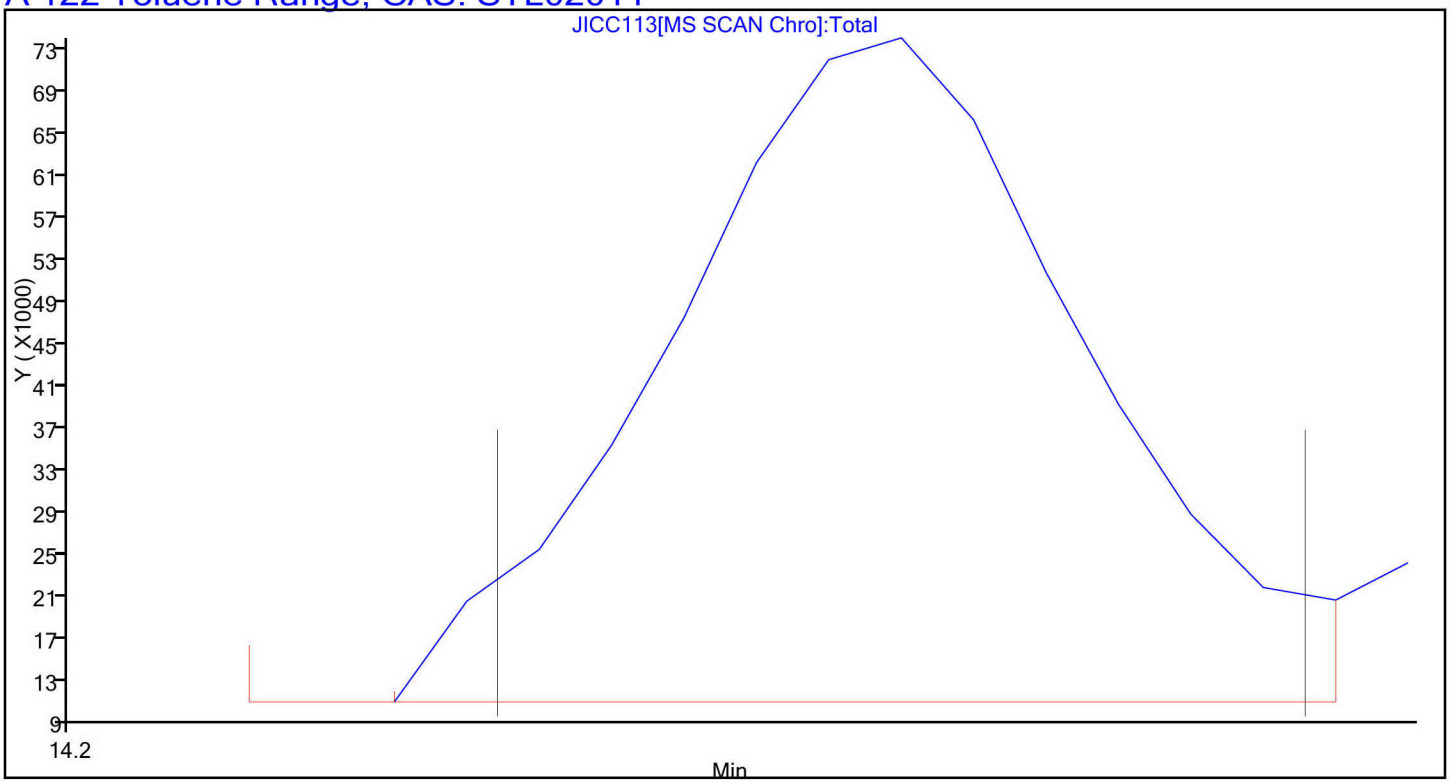
Report Date: 14-Mar-2014 14:45:46 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC113.D				
Injection Date:	11-Mar-2014 14:29:30	Instrument ID:	MJ		
Lims ID:	IC L3	Lab Sample ID:	Client 140-535/4-A		
Client ID:					
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 Toluene Range, CAS: STL02011



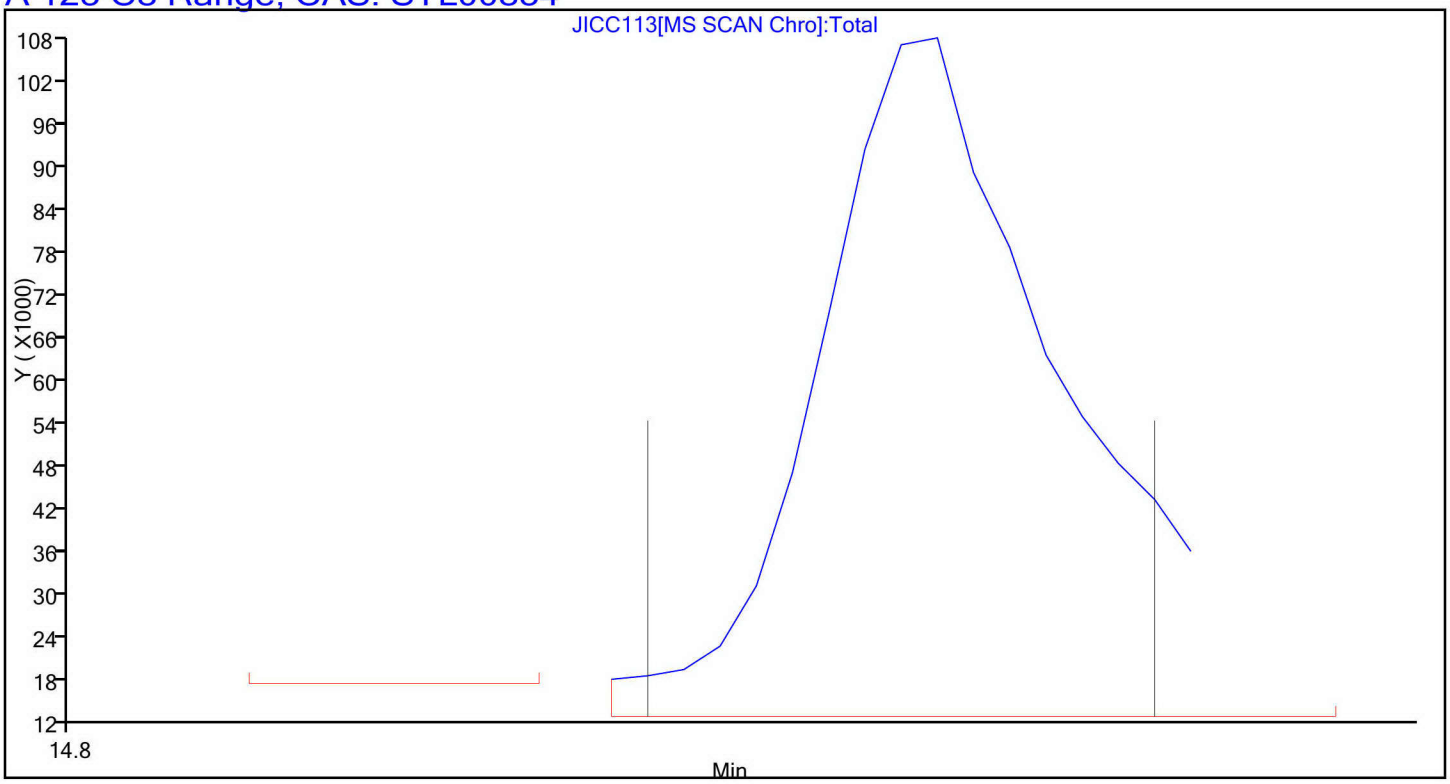
Report Date: 14-Mar-2014 14:45:46 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC113.D				
Injection Date:	11-Mar-2014 14:29:30	Instrument ID:	MJ		
Lims ID:	IC L3	Lab Sample ID:	Client 140-535/4-A		
Client ID:					
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 123 C8 Range, CAS: STL00834



May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC114.D
Lims ID: IC L4 Lab Sample ID:
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 11-Mar-2014 15:23:30 ALS Bottle#: 10 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: ICAL4,,1,4,,ICAL 0.4
Misc. Info.: J031114I,TO15,,140-0000516-005
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub3

Method: \\KNXCHROM\ChromData\MJ\20140311-516.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Mar-2014 14:45:29 Calib Date: 11-Mar-2014 19:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 14-Mar-2014 14:45:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.390	9.392	-0.002	93	343740	4.00	
* 2 1,4-Difluorobenzene	114	11.547	11.547	0.0	94	1630205	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.205	16.208	-0.003	87	1321433	4.00	
$ 5 4-Bromofluorobenzene (Surr)	95	17.825	17.825	0.0	90	911404	3.90	
6 Chlorodifluoromethane	67	3.962	3.960	0.002	96	13846	0.3903	
7 Propene	41	3.972	3.973	-0.001	99	44922	0.4262	
8 Dichlorodifluoromethane	85	4.032	4.029	0.003	100	134818	0.3960	
9 Chloromethane	52	4.231	4.230	0.001	100	15228	0.3937	
10 1,2-Dichloro-1,1,2,2-tetrafluoro	135	4.236	4.238	-0.002	92	93560	0.3641	
11 Acetaldehyde	44	4.397	4.398	-0.001	99	64164	1.89	
12 Vinyl chloride	62	4.419	4.419	0.0	98	51116	0.4011	
14 Butadiene	54	4.516	4.517	-0.001	65	35435	0.4002	
13 Butane	43	4.516	4.517	-0.001	86	71879	0.3963	
15 Bromomethane	94	4.871	4.871	0.0	94	50293	0.3880	
16 Chloroethane	64	5.027	5.027	0.0	98	23148	0.3949	
17 Ethanol	31	5.118	5.122	-0.004	94	58098	2.11	
18 Vinyl bromide	106	5.355	5.357	-0.002	94	42200	0.3828	
19 2-Methylbutane	43	5.414	5.411	0.003	91	57096	0.3911	
20 Trichlorofluoromethane	101	5.645	5.647	-0.002	97	116368	0.3890	
21 Acrolein	56	5.651	5.650	0.001	19	8002	0.2852	
22 Acetonitrile	40	5.721	5.720	0.001	99	11328	0.3655	
23 Acetone	58	5.775	5.776	-0.001	83	24784	0.5072	
24 Isopropyl alcohol	45	5.855	5.858	-0.003	94	52512	0.4070	
25 Pentane	72	5.882	5.884	-0.002	95	7244	0.3917	
26 Ethyl ether	31	6.065	6.059	0.006	90	29228	0.3250	
27 1,1-Dichloroethene	96	6.399	6.399	0.0	96	36039	0.3735	
28 2-Methyl-2-propanol	59	6.485	6.487	-0.002	93	66363	0.4175	
29 Acrylonitrile	53	6.495	6.498	-0.003	93	15228	0.2981	
30 1,1,2-Trichloro-1,2,2-trifluoroe	101	6.587	6.586	0.001	93	79676	0.3844	
31 Methylene Chloride	84	6.759	6.759	0.0	94	36329	0.3951	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.775	6.778	-0.003	91	35748	0.3737	
33 Carbon disulfide	76	6.942	6.942	0.0	99	124614	0.3854	
34 trans-1,2-Dichloroethene	96	7.604	7.609	-0.005	96	43537	0.3746	
35 2-Methylpentane	43	7.630	7.631	-0.001	94	102693	0.3872	
36 Methyl tert-butyl ether	73	7.738	7.738	0.0	95	59586	0.3396	
37 1,1-Dichloroethane	63	8.039	8.041	-0.002	96	65235	0.3596	
38 Vinyl acetate	43	8.142	8.141	0.001	99	48718	0.3066	
39 2-Butanone (MEK)	72	8.604	8.601	0.003	78	11813	0.3631	
40 Hexane	56	8.636	8.642	-0.006	87	34438	0.3727	
41 cis-1,2-Dichloroethene	96	9.051	9.052	-0.001	93	35319	0.3559	
42 Ethyl acetate	43	9.228	9.229	-0.001	95	46769	0.3300	
43 Chloroform	83	9.400	9.403	-0.003	80	71523	0.3571	
44 Tetrahydrofuran	42	9.815	9.816	-0.001	93	27476	0.3451	
45 1,1,1-Trichloroethane	97	10.449	10.450	-0.001	96	75903	0.3636	
46 1,2-Dichloroethane	62	10.546	10.547	-0.001	94	43695	0.3455	
47 n-Butanol	31	10.960	10.958	0.002	94	14706	0.4127	
48 Benzene	78	11.030	11.033	-0.003	96	97096	0.3471	
49 Cyclohexane	69	11.036	11.040	-0.004	93	20873	0.3782	
50 Carbon tetrachloride	117	11.057	11.059	-0.002	94	84912	0.3675	
51 2,3-Dimethylpentane	71	11.143	11.148	-0.005	91	23214	0.3518	
52 Thiophene	84	11.294	11.297	-0.003	93	60186	0.3484	
53 Isooctane	57	11.767	11.771	-0.004	97	173617	0.3635	
54 n-Heptane	71	12.128	12.130	-0.002	91	33732	0.3410	
55 1,2-Dichloropropane	63	12.214	12.214	0.0	84	30869	0.3265	
56 Trichloroethene	130	12.246	12.252	-0.006	95	46631	0.3437	
57 Dibromomethane	93	12.332	12.332	0.0	88	41095	0.3303	
59 Dichlorobromomethane	83	12.472	12.472	0.0	97	63861	0.3235	
58 1,4-Dioxane	88	12.483	12.483	0.0	45	11964	0.3532	
60 Methyl methacrylate	41	12.547	12.548	-0.001	84	24813	0.2925	
61 Methylcyclohexane	83	13.010	13.013	-0.003	95	65787	0.3494	
62 4-Methyl-2-pentanone (MIBK)	43	13.381	13.382	-0.001	93	52154	0.3052	
63 cis-1,3-Dichloropropene	75	13.446	13.448	-0.002	93	42126	0.3141	
64 trans-1,3-Dichloropropene	75	14.124	14.126	-0.002	92	35040	0.3200	
65 Toluene	91	14.258	14.262	-0.004	93	79532	0.3244	
66 1,1,2-Trichloroethane	83	14.328	14.328	0.0	95	26153	0.3366	
67 2-Methylthiophene	97	14.409	14.413	-0.004	95	73689	0.3345	
68 3-Methylthiophene	97	14.608	14.612	-0.004	94	73553	0.3328	
69 2-Hexanone	58	14.694	14.694	0.0	88	25873	0.3222	
70 n-Octane	85	14.925	14.928	-0.003	93	31719	0.3527	
71 Chlorodibromomethane	129	15.027	15.027	0.0	94	54305	0.3167	
72 Ethylene Dibromide	107	15.318	15.317	0.001	89	42940	0.3225	
73 Tetrachloroethene	129	15.393	15.393	0.0	90	38555	0.3376	
75 Chlorobenzene	112	16.254	16.256	-0.002	66	67168	0.3208	
74 2,3-Dimethylheptane	43	16.259	16.260	-0.001	95	107761	0.3992	
76 Ethylbenzene	91	16.534	16.536	-0.002	97	85699	0.3165	
77 2-Ethylthiophene	97	16.636	16.638	-0.002	91	66902	0.3153	
78 m-Xylene & p-Xylene	91	16.695	16.696	-0.001	99	133531	0.6111	
79 n-Nonane	57	17.098	17.098	0.0	93	57485	0.3381	
81 Bromoform	173	17.147	17.149	-0.002	92	36819	0.2718	
80 Styrene	104	17.158	17.157	0.001	95	41766	0.2783	
82 o-Xylene	91	17.217	17.220	-0.003	94	72917	0.3292	
83 1,1,2,2-Tetrachloroethane	83	17.534	17.534	0.0	97	58192	0.3215	

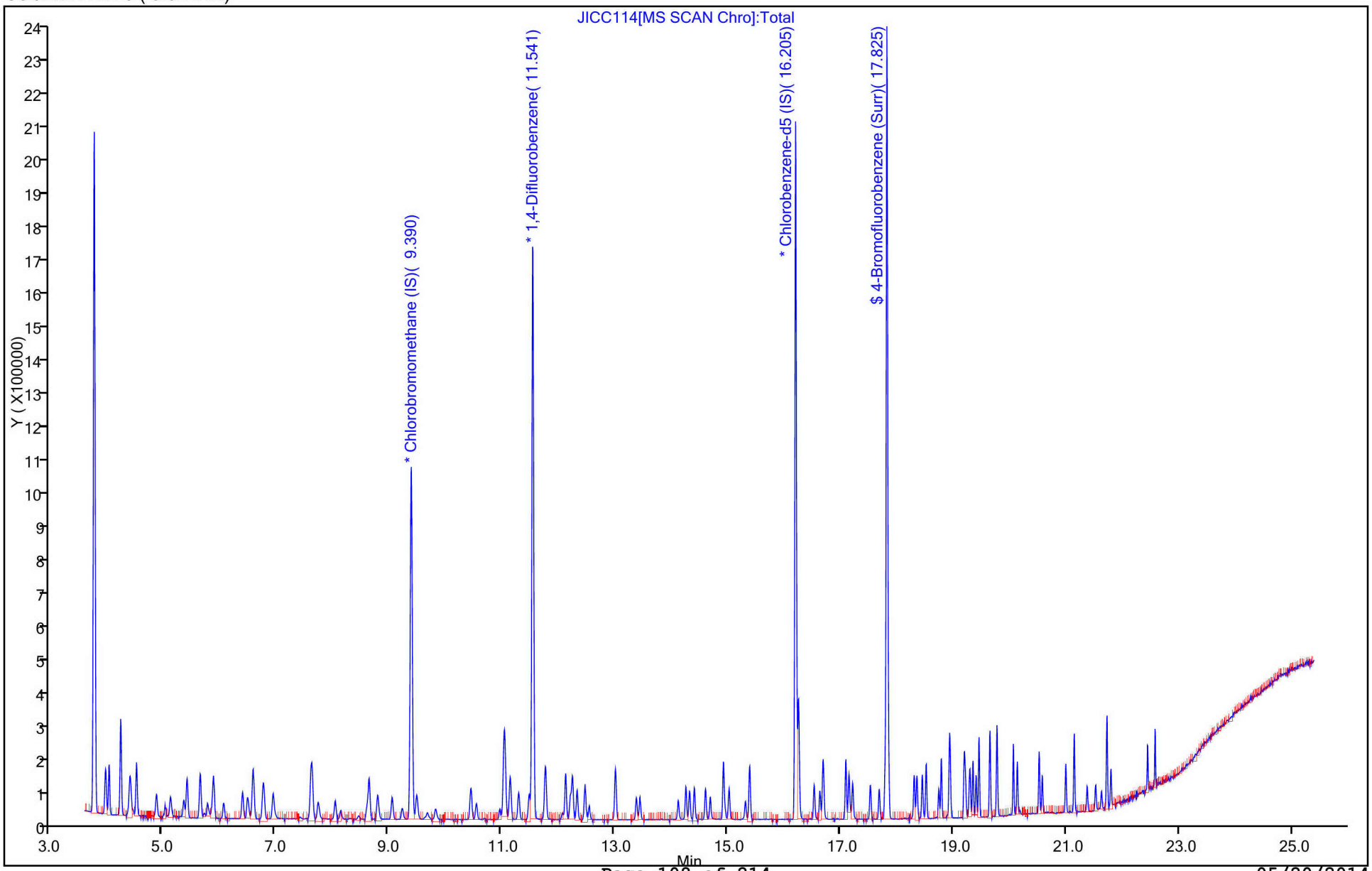
Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
84 1,2,3-Trichloropropane	110	17.690	17.690	0.0	95	13592	0.3132	
85 Isopropylbenzene	105	17.792	17.793	-0.001	83	100706	0.3191	
86 N-Propylbenzene	120	18.309	18.310	-0.001	97	24502	0.2944	
87 2-Chlorotoluene	126	18.357	18.357	0.0	94	26819	0.3088	
88 4-Ethyltoluene	105	18.454	18.454	0.0	96	89983	0.3057	
89 1,3,5-Trimethylbenzene	120	18.524	18.524	0.0	91	45307	0.3062	
90 Alpha Methyl Styrene	118	18.744	18.745	-0.001	81	27470	0.2591	
91 n-Decane	57	18.793	18.793	0.0	87	56293	0.3107	
92 tert-Butylbenzene	119	18.933	18.937	-0.004	83	89301	0.3090	
93 1,2,4-Trimethylbenzene	105	18.949	18.949	0.0	90	76446	0.2979	
94 sec-Butylbenzene	105	19.196	19.196	0.0	96	115821	0.3075	
95 1,3-Dichlorobenzene	146	19.218	19.217	0.001	96	46329	0.2747	
96 Benzyl chloride	91	19.288	19.288	0.0	95	52876	0.2759	
97 1,4-Dichlorobenzene	146	19.299	19.302	-0.003	92	43546	0.2774	
98 4-Isopropyltoluene	119	19.352	19.352	0.0	81	90008	0.2981	
99 1,2,3-Trimethylbenzene	105	19.406	19.409	-0.003	97	68250	0.3264	
100 Butylcyclohexane	83	19.460	19.460	0.0	91	78686	0.3297	
101 2,3-Dihydroindene	117	19.654	19.653	0.001	89	70569	0.3010	
102 1,2-Dichlorobenzene	146	19.654	19.653	0.001	78	46356	0.2810	
103 n-Butylbenzene	91	19.777	19.777	0.0	96	79971	0.2854	
104 Indene	116	19.777	19.781	-0.004	83	57358	0.2800	
105 Undecane	57	20.068	20.068	0.0	95	59319	0.3250	
106 1,2-Dimethyl-4-Ethylbenzene	119	20.138	20.138	0.0	93	80666	0.2849	
108 1,2,4,5-Tetramethylbenzene	119	20.525	20.525	0.0	96	89023	0.3130	
107 1,2,3,5-Tetramethylbenzene	119	20.579	20.582	-0.003	93	56702	0.3054	
109 1,2,3,4-Tetramethylbenzene	119	20.998	20.998	0.0	95	74166	0.3224	
110 Dodecane	57	21.149	21.148	0.001	92	65545	0.3468	
111 1,2,4-Trichlorobenzene	180	21.380	21.379	0.001	88	21000	0.2861	
112 Naphthalene	128	21.526	21.527	-0.001	98	60395	0.2905	
113 Benzo(b)thiophene	134	21.633	21.631	0.002	90	38727	0.2749	
114 Hexachlorobutadiene	225	21.730	21.729	0.001	83	45108	0.3008	
115 1,2,3-Trichlorobenzene	180	21.800	21.800	0.0	93	29244	0.3083	
116 2-Methylnaphthalene	142	22.451	22.449	0.002	97	47754	2.16	
117 1-Methylnaphthalene	142	22.585	22.583	0.002	97	56061	2.46	
139 Isopropyl ether	45	8.792	8.794	-0.002	96	82128	NR	
142 Tert-butyl ethyl ether	59	9.486	9.487	-0.001	93	74941	NR	
140 Tert-amyl methyl ether	73	11.482	11.482	0.0	76	70041	NR	
A 118 C6 Range	1	8.642	8.588 -	8.696	0	410756	0.4093	
A 122 Toluene Range	1	14.258	14.228 -	14.288	0	190190	0.3183	
A 123 C8 Range	1	14.925	14.882 -	14.968	0	360891	0.3898	
S 124 Xylenes, Total	100				0		0.9404	

Report Date: 14-Mar-2014 14:45:29 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC114.D				
Injection Date:	11-Mar-2014 15:23:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L4	Lab Sample ID:		Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



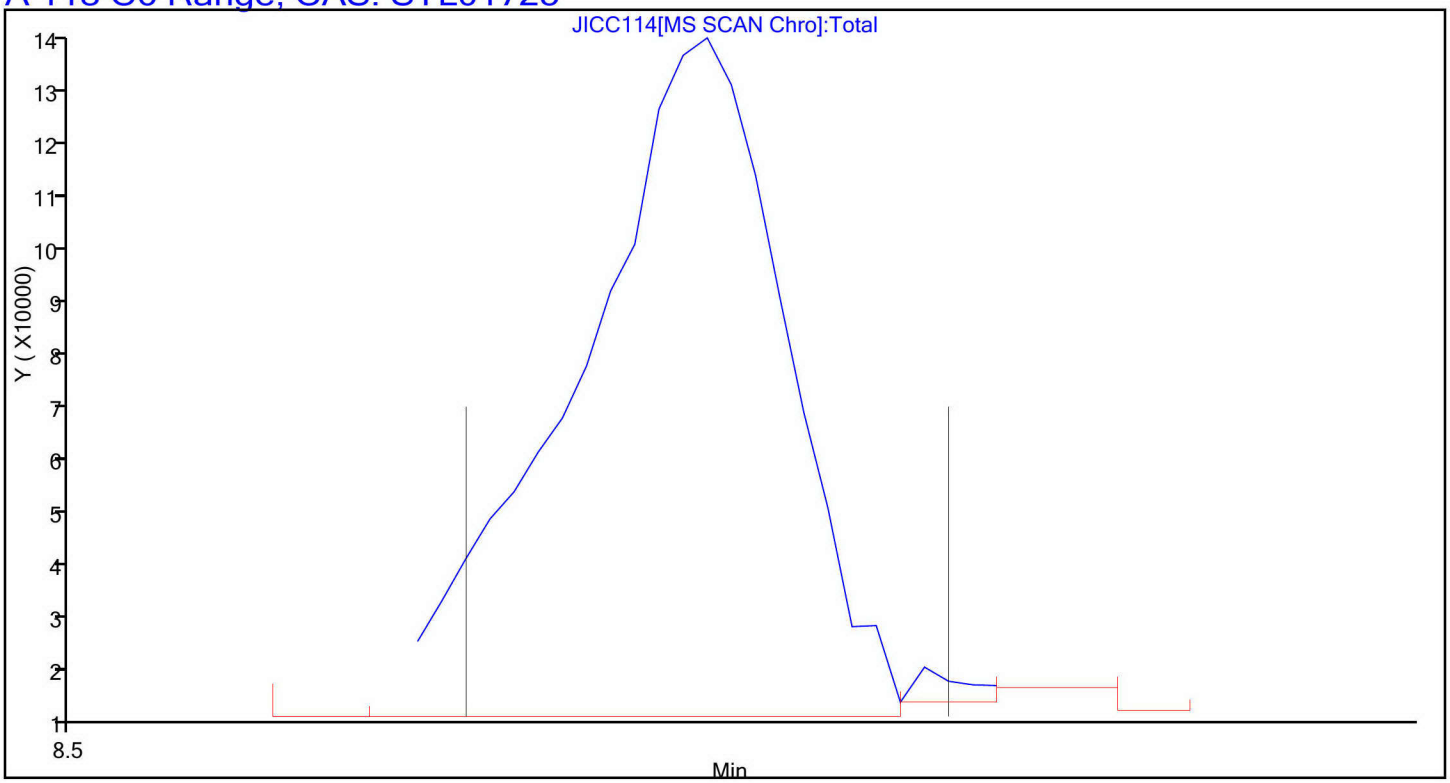
Report Date: 14-Mar-2014 14:45:30 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC114.D				
Injection Date:	11-Mar-2014 15:23:30	Instrument ID:	MJ		
Lims ID:	IC L4	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725



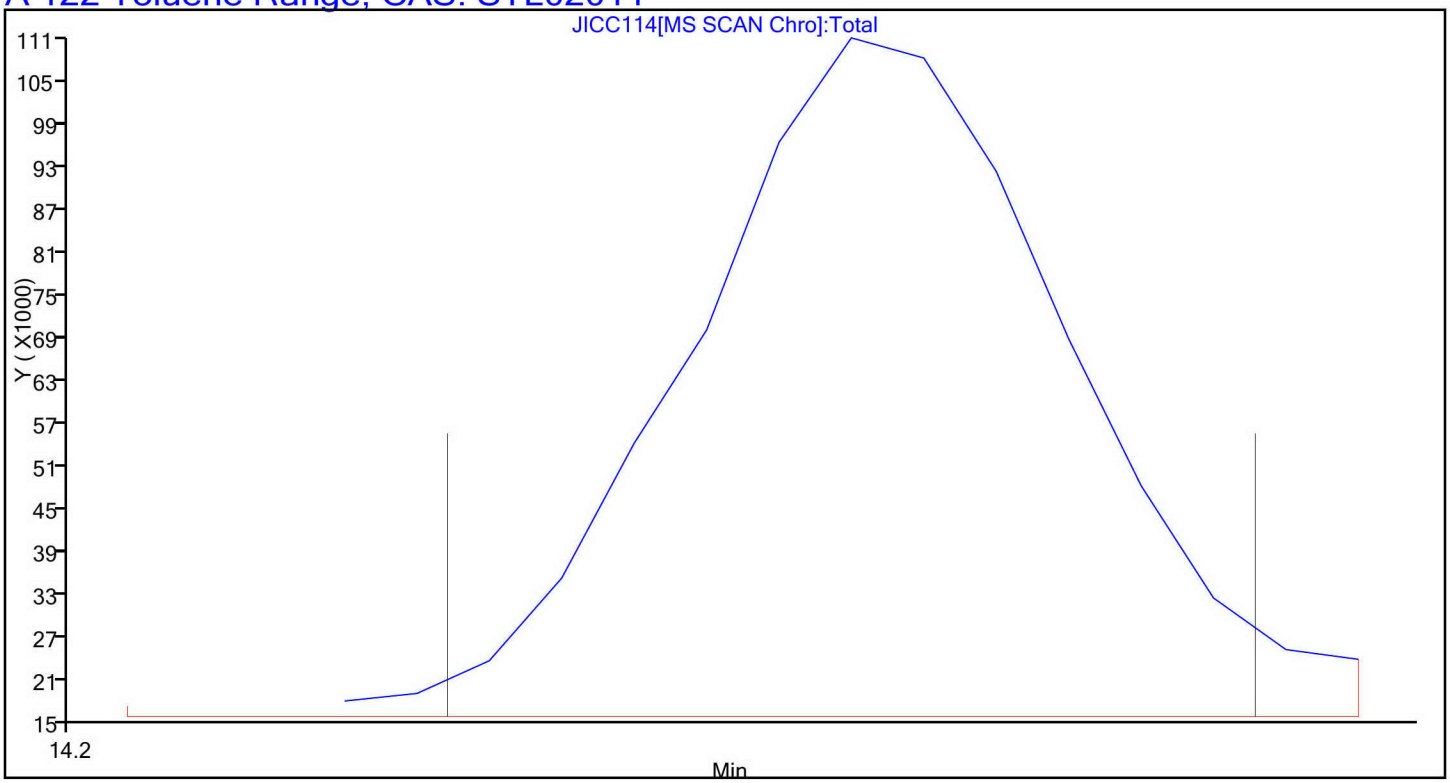
Report Date: 14-Mar-2014 14:45:30 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC114.D				
Injection Date:	11-Mar-2014 15:23:30	Instrument ID:	MJ		
Lims ID:	IC L4	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 Toluene Range, CAS: STL02011



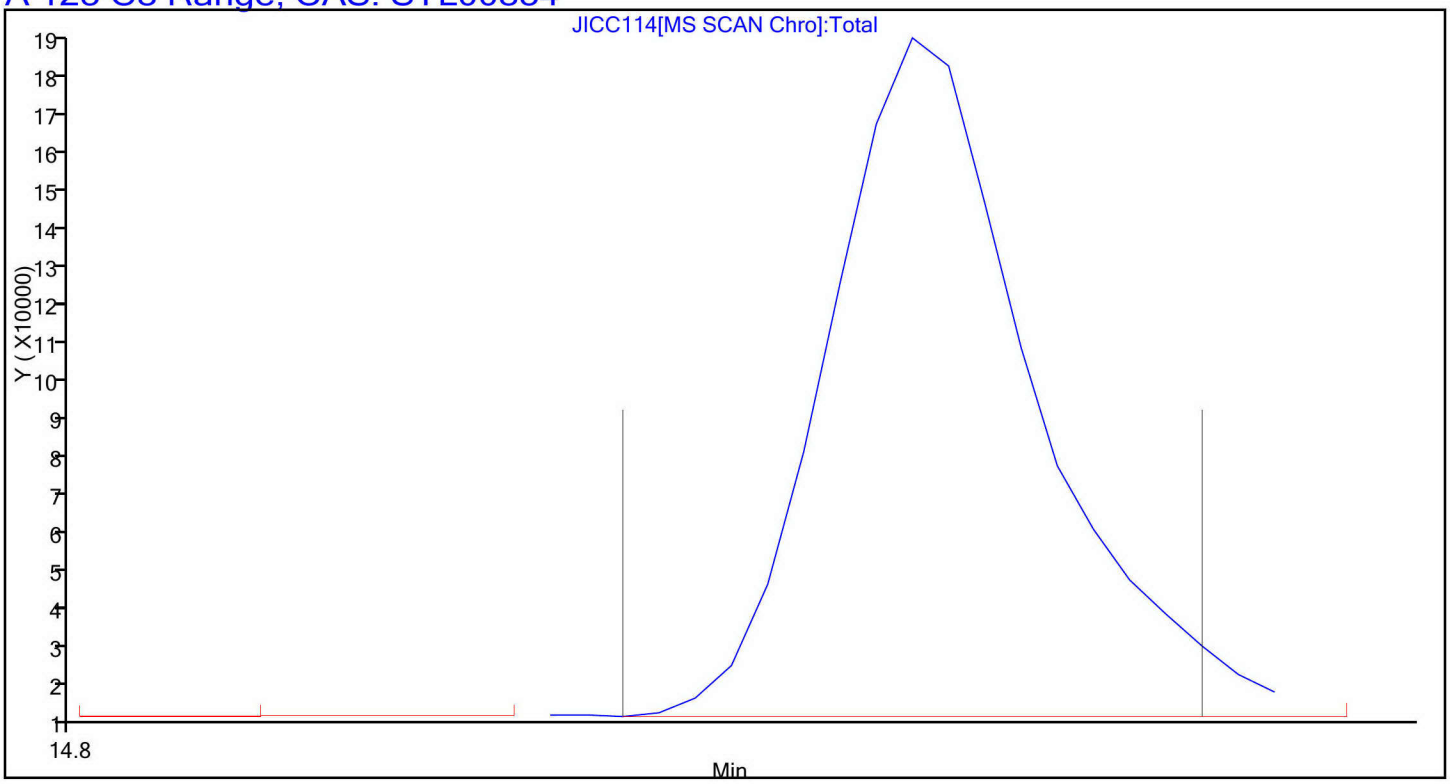
Report Date: 14-Mar-2014 14:45:30 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC114.D				
Injection Date:	11-Mar-2014 15:23:30	Instrument ID:	MJ		
Lims ID:	IC L4	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 123 C8 Range, CAS: STL00834



May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC115.D
Lims ID: IC L5 Lab Sample ID:
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 11-Mar-2014 16:17:30 ALS Bottle#: 11 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: ICAL5,,1,5,,ICAL 1
Misc. Info.: J031114I,TO15,,140-0000516-006
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub3

Method: \\KNXCHROM\ChromData\MJ\20140311-516.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Mar-2014 14:45:15 Calib Date: 11-Mar-2014 19:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 14-Mar-2014 14:45:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.393	9.392	0.001	93	350674	4.00	
* 2 1,4-Difluorobenzene	114	11.545	11.547	-0.002	93	1674047	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.209	16.208	0.001	86	1432884	4.00	
$ 5 4-Bromofluorobenzene (Surr)	95	17.823	17.825	-0.002	90	1030162	4.06	
6 Chlorodifluoromethane	67	3.960	3.960	0.0	97	32729	0.9044	
7 Propene	41	3.976	3.973	0.003	99	107699	1.00	
8 Dichlorodifluoromethane	85	4.030	4.029	0.001	100	334566	0.9632	
9 Chloromethane	52	4.229	4.230	-0.001	98	37407	0.9480	
10 1,2-Dichloro-1,1,2,2-tetrafluoro	135	4.240	4.238	0.002	91	251641	0.9599	
11 Acetaldehyde	44	4.396	4.398	-0.002	99	194092	5.61	
12 Vinyl chloride	62	4.417	4.419	-0.002	98	125449	0.9650	
14 Butadiene	54	4.514	4.517	-0.003	90	87385	0.9674	
13 Butane	43	4.519	4.517	0.002	86	173714	0.9389	
15 Bromomethane	94	4.874	4.871	0.003	98	123346	0.9329	
16 Chloroethane	64	5.025	5.027	-0.002	98	56692	0.9479	
17 Ethanol	31	5.117	5.122	-0.005	95	144711	5.14	
18 Vinyl bromide	106	5.359	5.357	0.002	97	105872	0.9415	
19 2-Methylbutane	43	5.412	5.411	0.001	92	140258	0.9417	
20 Trichlorofluoromethane	101	5.649	5.647	0.002	97	292818	0.9596	
21 Acrolein	56	5.649	5.650	-0.001	24	27013	0.9436	
22 Acetonitrile	40	5.719	5.720	-0.001	100	29505	0.9331	
23 Acetone	58	5.773	5.776	-0.003	85	72907	1.46	
24 Isopropyl alcohol	45	5.854	5.858	-0.004	96	127722	0.9703	
25 Pentane	72	5.886	5.884	0.002	96	18413	0.9759	
26 Ethyl ether	31	6.058	6.059	-0.001	93	94508	1.03	
27 1,1-Dichloroethene	96	6.402	6.399	0.003	97	90818	0.9225	
28 2-Methyl-2-propanol	59	6.478	6.487	-0.009	95	154458	0.9526	
29 Acrylonitrile	53	6.499	6.498	0.001	93	49792	0.9554	
30 1,1,2-Trichloro-1,2,2-trifluoroe	101	6.585	6.586	-0.001	94	201012	0.9507	
31 Methylene Chloride	84	6.757	6.759	-0.002	96	89695	0.9561	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.779	6.778	0.001	94	90749	0.9300	
33 Carbon disulfide	76	6.940	6.942	-0.002	99	313388	0.9500	
34 trans-1,2-Dichloroethene	96	7.613	7.609	0.004	98	110071	0.9282	
35 2-Methylpentane	43	7.629	7.631	-0.002	95	259682	0.9597	
36 Methyl tert-butyl ether	73	7.736	7.738	-0.002	95	180801	1.01	
37 1,1-Dichloroethane	63	8.043	8.041	0.002	100	183945	0.99	
38 Vinyl acetate	43	8.140	8.141	-0.001	100	159904	0.9863	
39 2-Butanone (MEK)	72	8.597	8.601	-0.004	99	35887	1.08	
40 Hexane	56	8.640	8.642	-0.002	89	89704	0.9515	
41 cis-1,2-Dichloroethene	96	9.054	9.052	0.002	95	100896	1.00	
42 Ethyl acetate	43	9.226	9.229	-0.003	97	144504	1.00	
43 Chloroform	83	9.404	9.403	0.001	87	200359	0.9806	
44 Tetrahydrofuran	42	9.813	9.816	-0.003	93	78446	0.9658	
45 1,1,1-Trichloroethane	97	10.448	10.450	-0.002	96	216140	1.01	
46 1,2-Dichloroethane	62	10.544	10.547	-0.003	96	125298	0.9648	
47 n-Butanol	31	10.953	10.958	-0.005	84	30453	0.8322	
48 Benzene	78	11.034	11.033	0.001	97	273136	0.9509	
49 Cyclohexane	69	11.039	11.040	-0.001	93	54874	0.9681	
50 Carbon tetrachloride	117	11.061	11.059	0.002	97	236385	1.00	
51 2,3-Dimethylpentane	71	11.147	11.148	-0.001	91	65875	0.9721	
52 Thiophene	84	11.298	11.297	0.001	96	173039	0.9755	
53 Isooctane	57	11.771	11.771	0.0	98	474988	0.9685	
54 n-Heptane	71	12.131	12.130	0.001	93	96771	0.9527	
55 1,2-Dichloropropane	63	12.212	12.214	-0.002	88	95014	0.9787	
56 Trichloroethene	130	12.250	12.252	-0.002	97	128335	0.9210	
57 Dibromomethane	93	12.330	12.332	-0.002	91	121268	0.9492	
59 Dichlorobromomethane	83	12.470	12.472	-0.002	98	190788	0.9411	
58 1,4-Dioxane	88	12.481	12.483	-0.002	87	31775	0.9134	
60 Methyl methacrylate	41	12.546	12.548	-0.002	90	82170	0.9434	
61 Methylcyclohexane	83	13.014	13.013	0.001	95	188580	0.9754	
62 4-Methyl-2-pentanone (MIBK)	43	13.379	13.382	-0.003	98	163854	0.9338	
63 cis-1,3-Dichloropropene	75	13.449	13.448	0.001	95	131004	0.9512	
64 trans-1,3-Dichloropropene	75	14.127	14.126	0.001	98	117538	0.9899	
65 Toluene	91	14.262	14.262	0.0	93	264651	1.00	
66 1,1,2-Trichloroethane	83	14.326	14.328	-0.002	96	84373	1.00	
67 2-Methylthiophene	97	14.412	14.413	-0.001	98	237579	0.99	
68 3-Methylthiophene	97	14.611	14.612	-0.001	99	241139	1.01	
69 2-Hexanone	58	14.692	14.694	-0.002	92	79350	0.9114	
70 n-Octane	85	14.929	14.928	0.001	94	94899	0.9730	
71 Chlorodibromomethane	129	15.026	15.027	-0.001	96	174527	0.9386	
72 Ethylene Dibromide	107	15.316	15.317	-0.001	97	142171	0.9847	
73 Tetrachloroethene	129	15.391	15.393	-0.002	92	112818	0.9111	
75 Chlorobenzene	112	16.257	16.256	0.001	84	213586	0.9406	
74 2,3-Dimethylheptane	43	16.257	16.260	-0.003	95	299289	1.02	
76 Ethylbenzene	91	16.537	16.536	0.001	98	284603	0.9693	
77 2-Ethylthiophene	97	16.639	16.638	0.001	97	225682	0.9808	
78 m-Xylene & p-Xylene	91	16.693	16.696	-0.003	100	437938	1.85	
79 n-Nonane	57	17.097	17.098	-0.001	93	182421	0.9895	
81 Bromoform	173	17.150	17.149	0.001	93	134430	0.9151	
80 Styrene	104	17.156	17.157	-0.001	98	156161	0.9598	
82 o-Xylene	91	17.220	17.220	0.0	96	232024	0.9661	
83 1,1,2,2-Tetrachloroethane	83	17.532	17.534	-0.002	99	183648	0.9358	

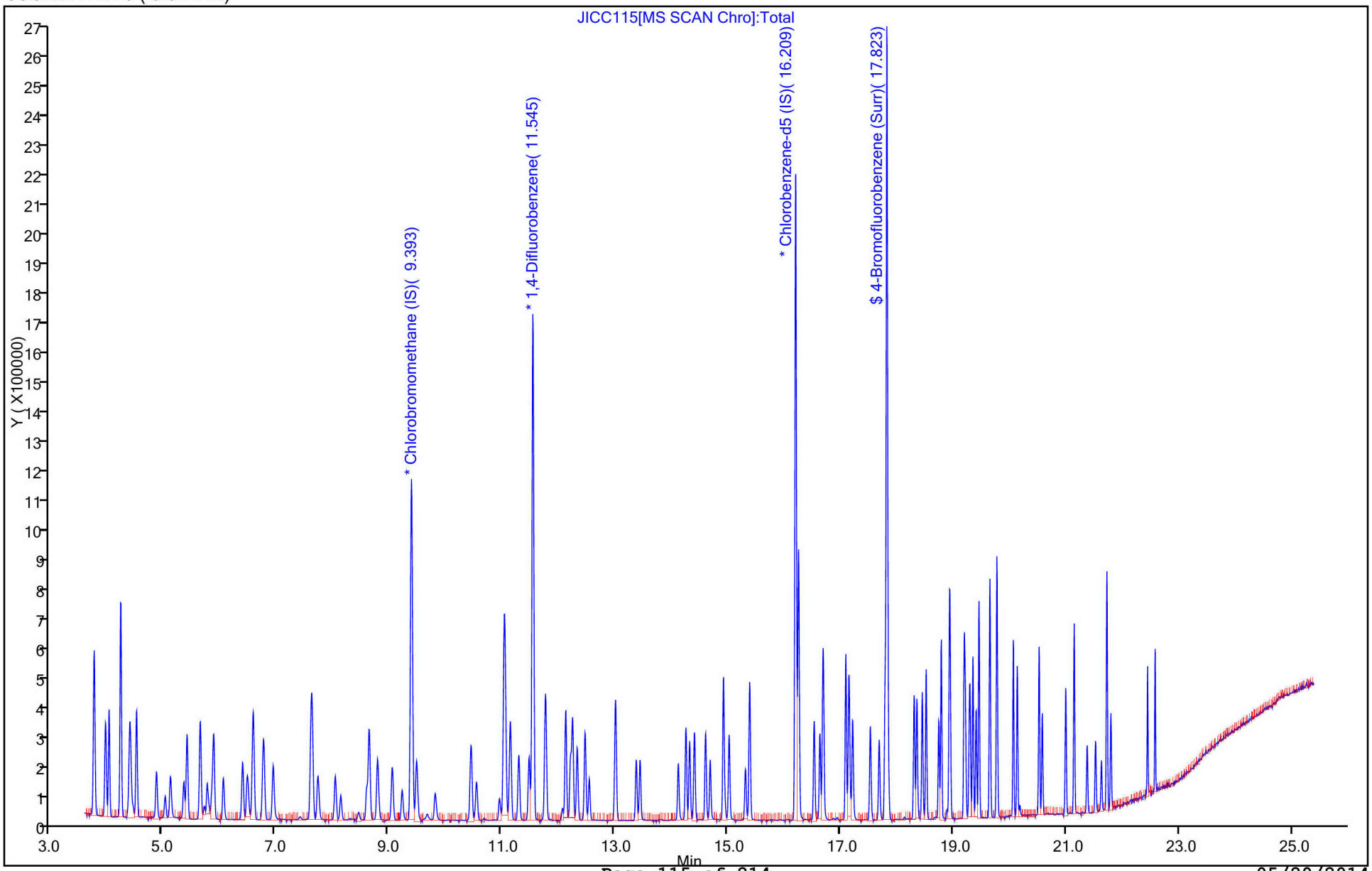
Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
84 1,2,3-Trichloropropane	110	17.688	17.690	-0.002	97	43710	0.9288	
85 Isopropylbenzene	105	17.791	17.793	-0.002	96	322210	0.9415	
86 N-Propylbenzene	120	18.307	18.310	-0.003	98	81294	0.9008	
87 2-Chlorotoluene	126	18.355	18.357	-0.002	97	86903	0.9227	
88 4-Ethyltoluene	105	18.452	18.454	-0.002	98	291767	0.9142	
89 1,3,5-Trimethylbenzene	120	18.522	18.524	-0.002	92	140307	0.8745	
90 Alpha Methyl Styrene	118	18.743	18.745	-0.002	84	104233	0.9066	
91 n-Decane	57	18.791	18.793	-0.002	88	192549	0.9800	
92 tert-Butylbenzene	119	18.936	18.937	-0.001	87	276681	0.8830	
93 1,2,4-Trimethylbenzene	105	18.947	18.949	-0.002	95	247215	0.8884	
94 sec-Butylbenzene	105	19.195	19.196	-0.001	98	371473	0.9095	
95 1,3-Dichlorobenzene	146	19.216	19.217	-0.001	98	150681	0.8238	
96 Benzyl chloride	91	19.286	19.288	-0.002	98	171797	0.8266	
97 1,4-Dichlorobenzene	146	19.302	19.302	0.0	93	135286	0.7947	
98 4-Isopropyltoluene	119	19.351	19.352	-0.001	88	295742	0.9032	
99 1,2,3-Trimethylbenzene	105	19.410	19.409	0.001	98	207460	0.9149	
100 Butylcyclohexane	83	19.458	19.460	-0.002	93	250533	0.9680	
101 2,3-Dihydroindene	117	19.652	19.653	-0.001	89	223109	0.8775	
102 1,2-Dichlorobenzene	146	19.652	19.653	-0.001	79	148540	0.8303	
103 n-Butylbenzene	91	19.776	19.777	-0.001	96	267179	0.8794	
104 Indene	116	19.781	19.781	0.0	85	196085	0.8826	
105 Undecane	57	20.066	20.068	-0.002	96	175793	0.8882	
106 1,2-Dimethyl-4-Ethylbenzene	119	20.136	20.138	-0.002	97	268427	0.8743	
108 1,2,4,5-Tetramethylbenzene	119	20.523	20.525	-0.002	97	282429	0.9156	
107 1,2,3,5-Tetramethylbenzene	119	20.583	20.582	0.001	94	177582	0.8820	
109 1,2,3,4-Tetramethylbenzene	119	20.997	20.998	-0.001	97	222908	0.8936	
110 Dodecane	57	21.147	21.148	-0.001	94	185701	0.9061	
111 1,2,4-Trichlorobenzene	180	21.379	21.379	0.0	94	66621	0.8371	
112 Naphthalene	128	21.529	21.527	0.002	99	186491	0.8271	
113 Benzo(b)thiophene	134	21.632	21.631	0.001	98	119182	0.7801	
114 Hexachlorobutadiene	225	21.728	21.729	-0.001	84	136244	0.8378	
115 1,2,3-Trichlorobenzene	180	21.798	21.800	-0.002	95	87992	0.8556	
116 2-Methylnaphthalene	142	22.449	22.449	0.0	99	149184	6.22	
117 1-Methylnaphthalene	142	22.584	22.583	0.001	96	164584	6.66	
139 Isopropyl ether	45	8.791	8.794	-0.003	97	244016	NR	
142 Tert-butyl ethyl ether	59	9.485	9.487	-0.002	95	220627	NR	
140 Tert-amyl methyl ether	73	11.480	11.482	-0.002	81	203973	NR	
A 118 C6 Range	1	8.640	8.581 -	8.699	0	1022928	1.00	
A 122 Toluene Range	1	14.262	14.232 -	14.292	0	633377	0.9777	
A 123 C8 Range	1	14.934	14.886 -	14.983	0	997149	0.99	
S 124 Xylenes, Total	100				0		2.81	

Report Date: 14-Mar-2014 14:45:16 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC115.D				
Injection Date:	11-Mar-2014 16:17:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L5	Lab Sample ID:		Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



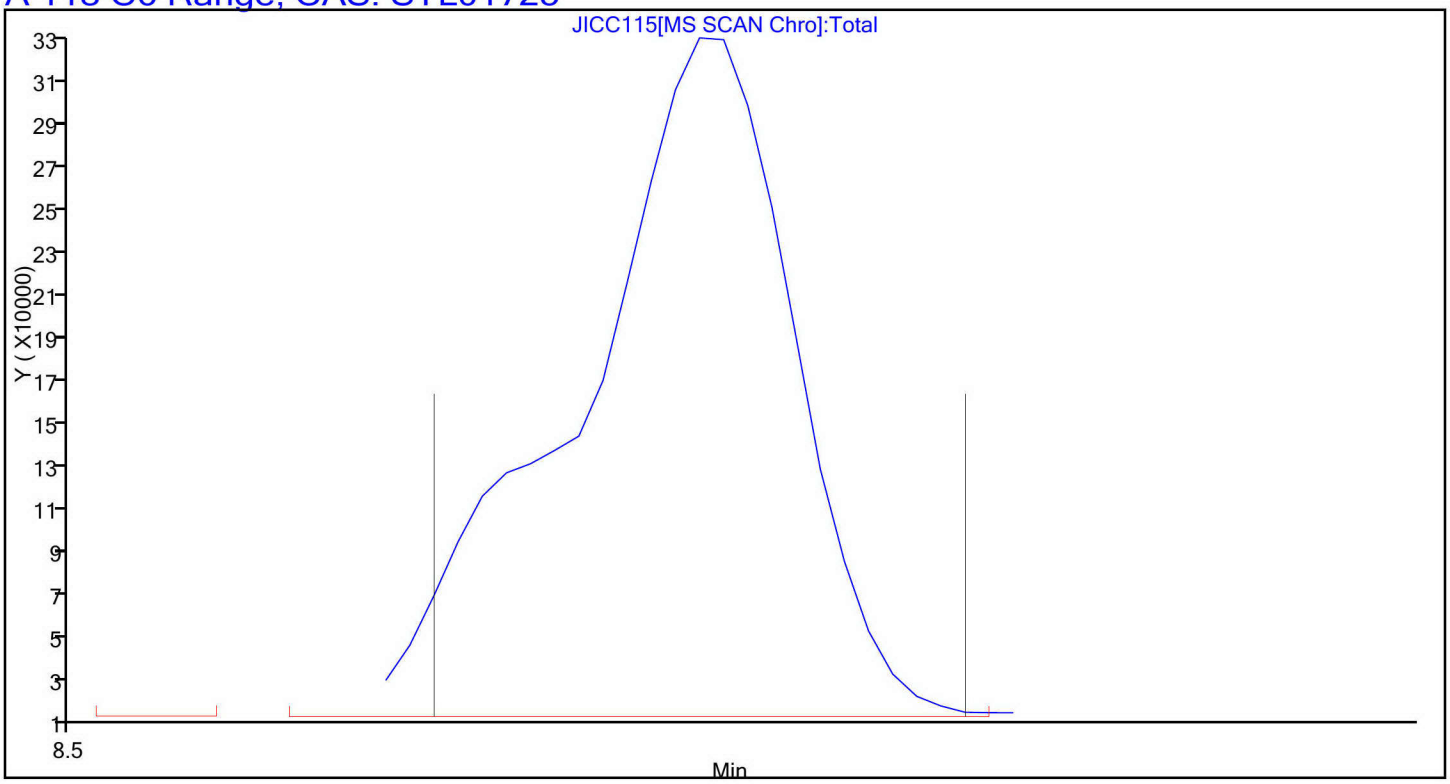
Report Date: 14-Mar-2014 14:45:16 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC115.D				
Injection Date:	11-Mar-2014 16:17:30	Instrument ID:	MJ		
Lims ID:	IC L5	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725



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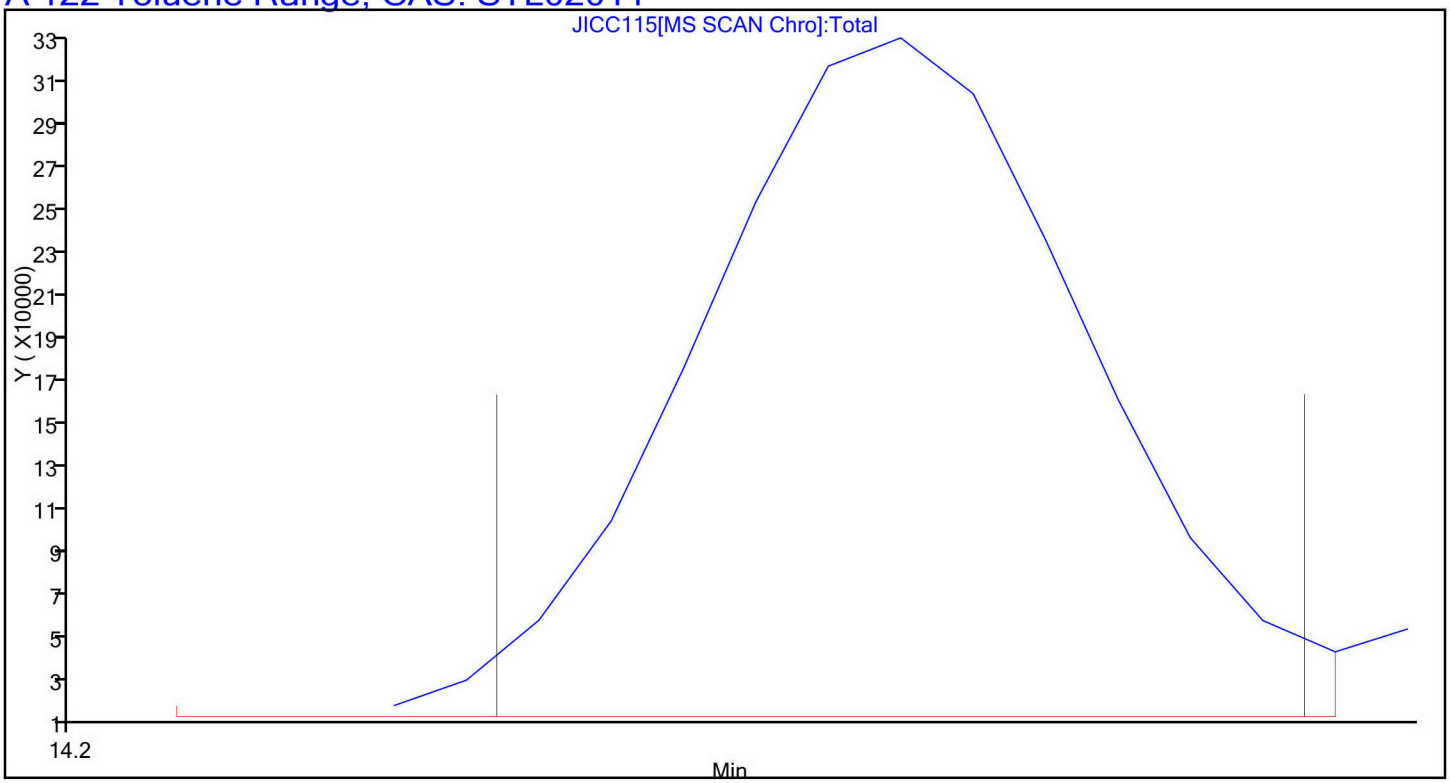
May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC115.D				
Injection Date:	11-Mar-2014 16:17:30	Instrument ID:	MJ		
Lims ID:	IC L5	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 Toluene Range, CAS: STL02011



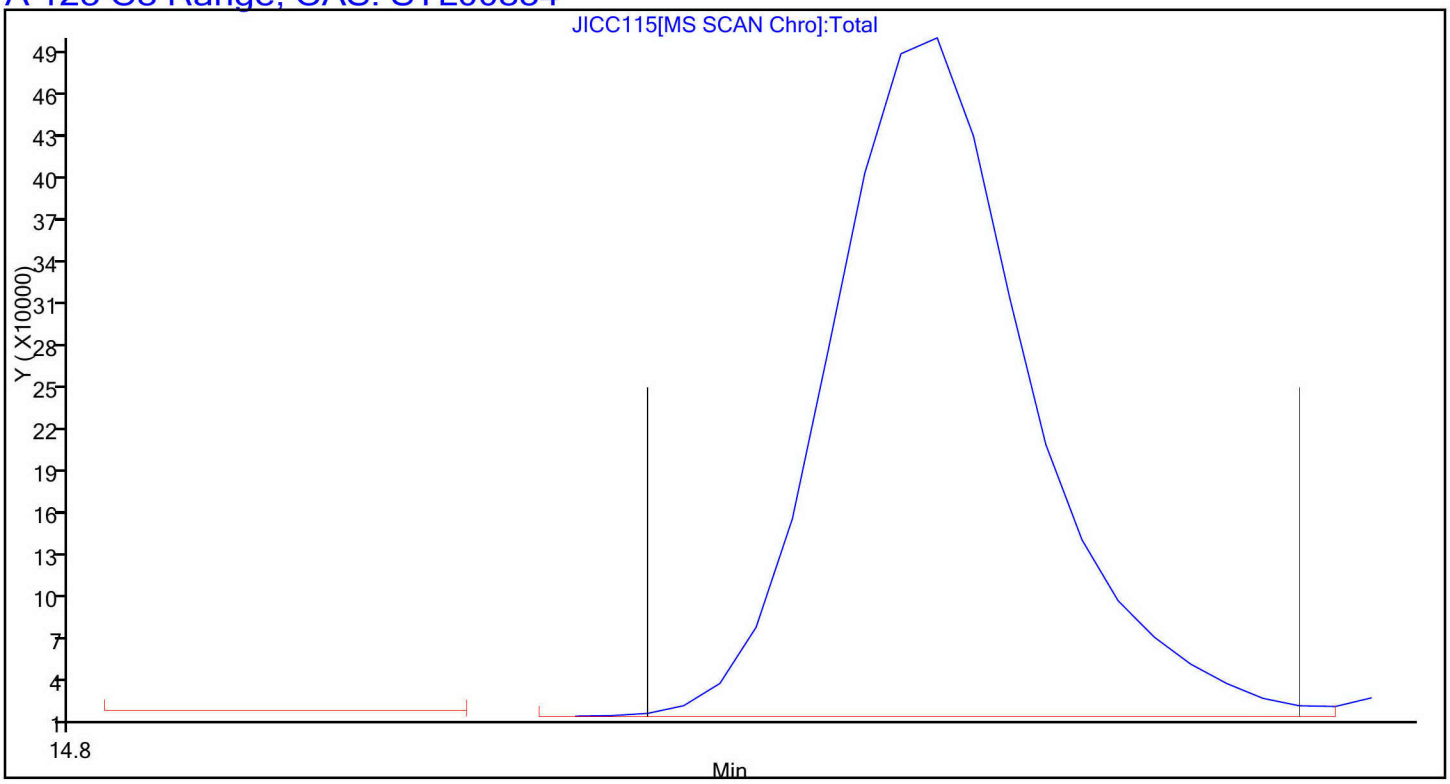
Report Date: 14-Mar-2014 14:45:16 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC115.D				
Injection Date:	11-Mar-2014 16:17:30	Instrument ID:	MJ		
Lims ID:	IC L5	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 123 C8 Range, CAS: STL00834



May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC116.D
Lims ID: ICIS L6 Lab Sample ID:
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 11-Mar-2014 17:11:30 ALS Bottle#: 12 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: ICAL6,,1,6,,ICAL 2
Misc. Info.: J031114I,TO15,,140-0000516-007
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub3

Method: \\KNXCHROM\ChromData\MJ\20140311-516.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Mar-2014 14:47:02 Calib Date: 11-Mar-2014 19:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.394	9.392	0.002	92	351204	4.00	
* 2 1,4-Difluorobenzene	114	11.545	11.547	-0.002	92	1664083	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.209	16.208	0.001	86	1450172	4.00	
$ 5 4-Bromofluorobenzene (Surr)	95	17.823	17.825	-0.002	89	1040623	4.06	
6 Chlorodifluoromethane	67	3.960	3.960	0.0	97	65895	1.82	
7 Propene	41	3.971	3.973	-0.002	99	203864	1.89	
8 Dichlorodifluoromethane	85	4.030	4.029	0.001	100	677907	1.95	
9 Chloromethane	52	4.229	4.230	-0.001	98	75510	1.91	
10 1,2-Dichloro-1,1,2,2-tetrafluoro	135	4.240	4.238	0.002	92	515628	1.96	
11 Acetaldehyde	44	4.396	4.398	-0.002	99	339724	9.80	
12 Vinyl chloride	62	4.418	4.419	-0.001	99	254791	1.96	
14 Butadiene	54	4.514	4.517	-0.003	66	175277	1.94	
13 Butane	43	4.514	4.517	-0.003	86	348021	1.88	
15 Bromomethane	94	4.869	4.871	-0.002	99	250854	1.89	
16 Chloroethane	64	5.025	5.027	-0.002	100	113435	1.89	
17 Ethanol	31	5.117	5.122	-0.005	95	281128	9.97	
18 Vinyl bromide	106	5.354	5.357	-0.003	97	216421	1.92	
19 2-Methylbutane	43	5.413	5.411	0.002	92	280290	1.88	
20 Trichlorofluoromethane	101	5.649	5.647	0.002	98	594264	1.94	
21 Acrolein	56	5.649	5.650	-0.001	68	53042	1.85	
22 Acetonitrile	40	5.714	5.720	-0.006	100	59141	1.87	
23 Acetone	58	5.773	5.776	-0.003	85	101503	2.03	
24 Isopropyl alcohol	45	5.849	5.858	-0.009	94	252925	1.92	
25 Pentane	72	5.886	5.884	0.002	97	37045	1.96	
26 Ethyl ether	31	6.053	6.059	-0.006	93	179455	1.95	
27 1,1-Dichloroethene	96	6.397	6.399	-0.002	97	184446	1.87	
28 2-Methyl-2-propanol	59	6.473	6.487	-0.014	95	272663	1.68	
29 Acrylonitrile	53	6.494	6.498	-0.004	95	99812	1.91	
30 1,1,2-Trichloro-1,2,2-trifluoroe	101	6.586	6.586	0.0	95	409082	1.93	
31 Methylene Chloride	84	6.758	6.759	-0.001	95	180581	1.92	
32 3-Chloro-1-propene	39	6.779	6.778	0.001	94	183622	1.88	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
33 Carbon disulfide	76	6.941	6.942	-0.001	99	641989	1.94	
34 trans-1,2-Dichloroethene	96	7.608	7.609	-0.001	98	225627	1.90	
35 2-Methylpentane	43	7.629	7.631	-0.002	95	522389	1.93	
36 Methyl tert-butyl ether	73	7.731	7.738	-0.007	96	356577	1.99	
37 1,1-Dichloroethane	63	8.043	8.041	0.002	100	362051	1.95	
38 Vinyl acetate	43	8.140	8.141	-0.001	100	322885	1.99	
39 2-Butanone (MEK)	72	8.597	8.601	-0.004	99	69610	2.09	
40 Hexane	56	8.640	8.642	-0.002	90	180662	1.91	
41 cis-1,2-Dichloroethene	96	9.049	9.052	-0.003	95	200551	1.98	
42 Ethyl acetate	43	9.227	9.229	-0.002	97	292814	2.02	
43 Chloroform	83	9.404	9.403	0.001	96	388598	1.90	
44 Tetrahydrofuran	42	9.808	9.816	-0.008	94	156408	1.92	
45 1,1,1-Trichloroethane	97	10.448	10.450	-0.002	96	422225	1.98	
46 1,2-Dichloroethane	62	10.545	10.547	-0.002	95	248475	1.92	
47 n-Butanol	31	10.948	10.958	-0.010	88	63073	1.73	
48 Benzene	78	11.034	11.033	0.001	97	540059	1.89	
49 Cyclohexane	69	11.040	11.040	0.0	92	110363	1.96	
50 Carbon tetrachloride	117	11.061	11.059	0.002	96	443845	1.88	
51 2,3-Dimethylpentane	71	11.147	11.148	-0.001	91	127368	1.89	
52 Thiophene	84	11.298	11.297	0.001	96	339429	1.93	
53 Isooctane	57	11.771	11.771	0.0	98	916367	1.88	
54 n-Heptane	71	12.132	12.130	0.002	92	191563	1.90	
55 1,2-Dichloropropane	63	12.212	12.214	-0.002	88	187039	1.94	
56 Trichloroethene	130	12.250	12.252	-0.002	93	255418	1.84	
57 Dibromomethane	93	12.331	12.332	-0.001	91	238917	1.88	
59 Dichlorobromomethane	83	12.471	12.472	-0.001	99	383587	1.90	
58 1,4-Dioxane	88	12.476	12.483	-0.007	85	63279	1.83	
60 Methyl methacrylate	41	12.546	12.548	-0.002	91	169117	1.95	
61 Methylcyclohexane	83	13.014	13.013	0.001	96	363492	1.89	
62 4-Methyl-2-pentanone (MIBK)	43	13.380	13.382	-0.002	98	336876	1.93	
63 cis-1,3-Dichloropropene	75	13.450	13.448	0.002	94	261947	1.91	
64 trans-1,3-Dichloropropene	75	14.128	14.126	0.002	98	234824	1.95	
65 Toluene	91	14.262	14.262	0.0	94	519669	1.93	
66 1,1,2-Trichloroethane	83	14.327	14.328	-0.001	97	166783	1.96	
67 2-Methylthiophene	97	14.413	14.413	0.0	98	477759	1.98	
68 3-Methylthiophene	97	14.612	14.612	0.0	99	476584	1.97	
69 2-Hexanone	58	14.692	14.694	-0.002	93	161365	1.83	
70 n-Octane	85	14.929	14.928	0.001	94	185219	1.88	
71 Chlorodibromomethane	129	15.026	15.027	-0.001	96	362439	1.93	
72 Ethylene Dibromide	107	15.316	15.317	-0.001	98	283094	1.94	
73 Tetrachloroethene	129	15.392	15.393	-0.001	92	226667	1.81	
75 Chlorobenzene	112	16.258	16.256	0.002	87	423684	1.84	
74 2,3-Dimethylheptane	43	16.258	16.260	-0.002	95	563663	1.90	
76 Ethylbenzene	91	16.538	16.536	0.002	98	566249	1.91	
77 2-Ethylthiophene	97	16.640	16.638	0.002	97	450374	1.93	
78 m-Xylene & p-Xylene	91	16.694	16.696	-0.002	100	877038	3.66	
79 n-Nonane	57	17.097	17.098	-0.001	93	359753	1.93	
81 Bromoform	173	17.151	17.149	0.002	94	285787	1.92	
80 Styrene	104	17.156	17.157	-0.001	98	329540	2.00	
82 o-Xylene	91	17.221	17.220	0.001	96	451038	1.86	
83 1,1,2,2-Tetrachloroethane	83	17.533	17.534	-0.001	99	370844	1.87	
84 1,2,3-Trichloropropane	110	17.689	17.690	-0.001	97	88416	1.86	

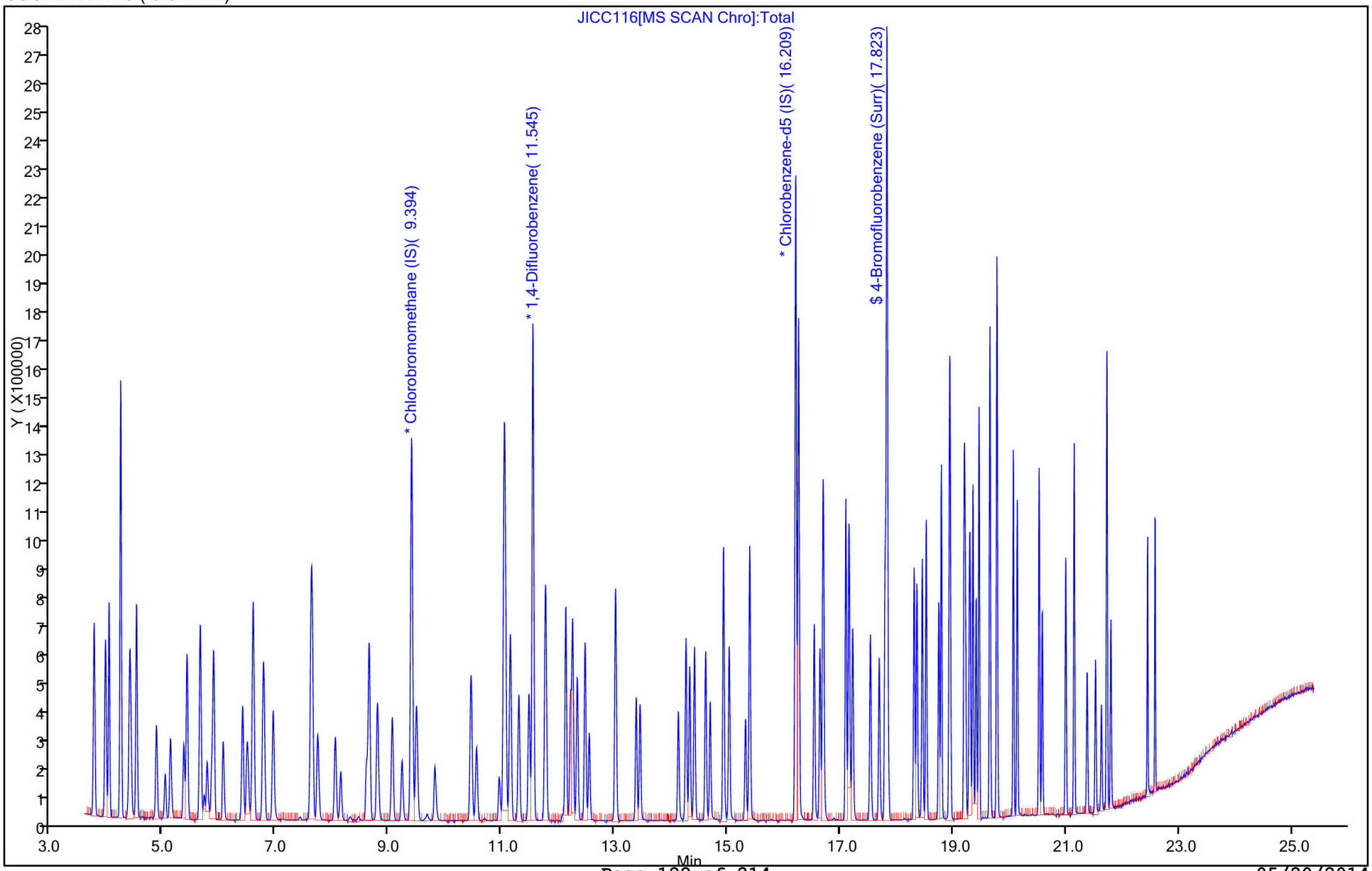
Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.791	17.793	-0.002	97	640978	1.85	
86 N-Propylbenzene	120	18.307	18.310	-0.003	98	169743	1.86	
87 2-Chlorotoluene	126	18.356	18.357	-0.001	97	172536	1.81	
88 4-Ethyltoluene	105	18.453	18.454	-0.001	97	602615	1.87	
89 1,3,5-Trimethylbenzene	120	18.523	18.524	-0.001	92	288648	1.78	
90 Alpha Methyl Styrene	118	18.743	18.745	-0.002	85	232501	2.00	
91 n-Decane	57	18.792	18.793	-0.001	89	383736	1.93	
92 tert-Butylbenzene	119	18.937	18.937	0.0	87	563181	1.78	
93 1,2,4-Trimethylbenzene	105	18.948	18.949	-0.001	95	510168	1.81	
94 sec-Butylbenzene	105	19.195	19.196	-0.001	98	753094	1.82	
95 1,3-Dichlorobenzene	146	19.217	19.217	-0.001	99	312974	1.69	
96 Benzyl chloride	91	19.286	19.288	-0.002	98	376583	1.79	
97 1,4-Dichlorobenzene	146	19.303	19.302	0.001	94	286084	1.66	
98 4-Isopropyltoluene	119	19.351	19.352	-0.001	88	611347	1.84	
99 1,2,3-Trimethylbenzene	105	19.410	19.409	0.001	98	421832	1.84	
100 Butylcyclohexane	83	19.459	19.460	-0.001	93	480940	1.84	
101 2,3-Dihydroindene	117	19.652	19.653	-0.001	89	462728	1.80	
102 1,2-Dichlorobenzene	146	19.652	19.653	-0.001	80	310746	1.72	
103 n-Butylbenzene	91	19.776	19.777	-0.001	97	566214	1.84	
104 Indene	116	19.781	19.781	0.0	86	427230	1.90	
105 Undecane	57	20.066	20.068	-0.002	96	366563	1.83	
106 1,2-Dimethyl-4-Ethylbenzene	119	20.136	20.138	-0.002	97	564256	1.82	
108 1,2,4,5-Tetramethylbenzene	119	20.524	20.525	-0.001	96	585097	1.87	
107 1,2,3,5-Tetramethylbenzene	119	20.583	20.582	0.001	95	360803	1.77	
109 1,2,3,4-Tetramethylbenzene	119	20.997	20.998	-0.001	96	458134	1.81	
110 Dodecane	57	21.148	21.148	0.0	95	378646	1.83	
111 1,2,4-Trichlorobenzene	180	21.379	21.379	0.0	94	143447	1.78	
112 Naphthalene	128	21.524	21.527	-0.003	99	394479	1.73	
113 Benzo(b)thiophene	134	21.632	21.631	0.001	99	259843	1.68	
114 Hexachlorobutadiene	225	21.729	21.729	0.0	84	268985	1.63	
115 1,2,3-Trichlorobenzene	180	21.799	21.800	-0.001	95	178007	1.71	
116 2-Methylnaphthalene	142	22.450	22.449	0.001	98	307709	12.7	
117 1-Methylnaphthalene	142	22.584	22.583	0.001	96	331073	13.2	
139 Isopropyl ether	45	8.791	8.794	-0.003	97	479467	NR	
142 Tert-butyl ethyl ether	59	9.480	9.487	-0.007	95	438027	NR	
140 Tert-amyl methyl ether	73	11.475	11.482	-0.007	92	413190	NR	
A 118 C6 Range	1	8.640	8.571 -	8.710	0	2011864	1.96	
A 122 Toluene Range	1	14.262	14.232 -	14.292	0	1258419	1.92	
A 123 C8 Range	1	14.927	14.881 -	14.988	0	1829147	1.80	
S 124 Xylenes, Total	100				0		5.51	

Report Date: 14-Mar-2014 14:47:03 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC116.D				
Injection Date:	11-Mar-2014 17:11:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	ICIS L6	Lab Sample ID:		Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



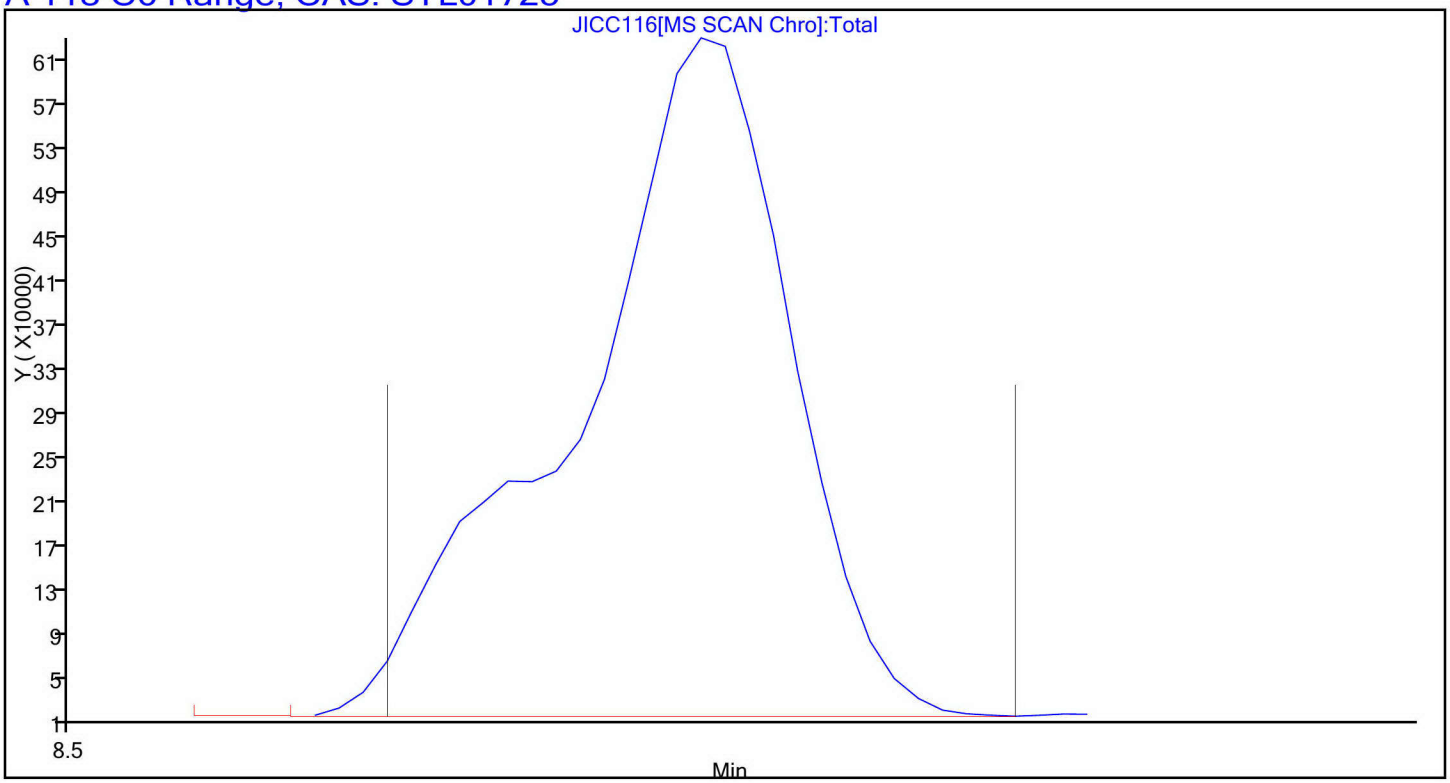
Report Date: 14-Mar-2014 14:47:03 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC116.D				
Injection Date:	11-Mar-2014 17:11:30	Instrument ID:	MJ		
Lims ID:	ICIS L6	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	12	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725



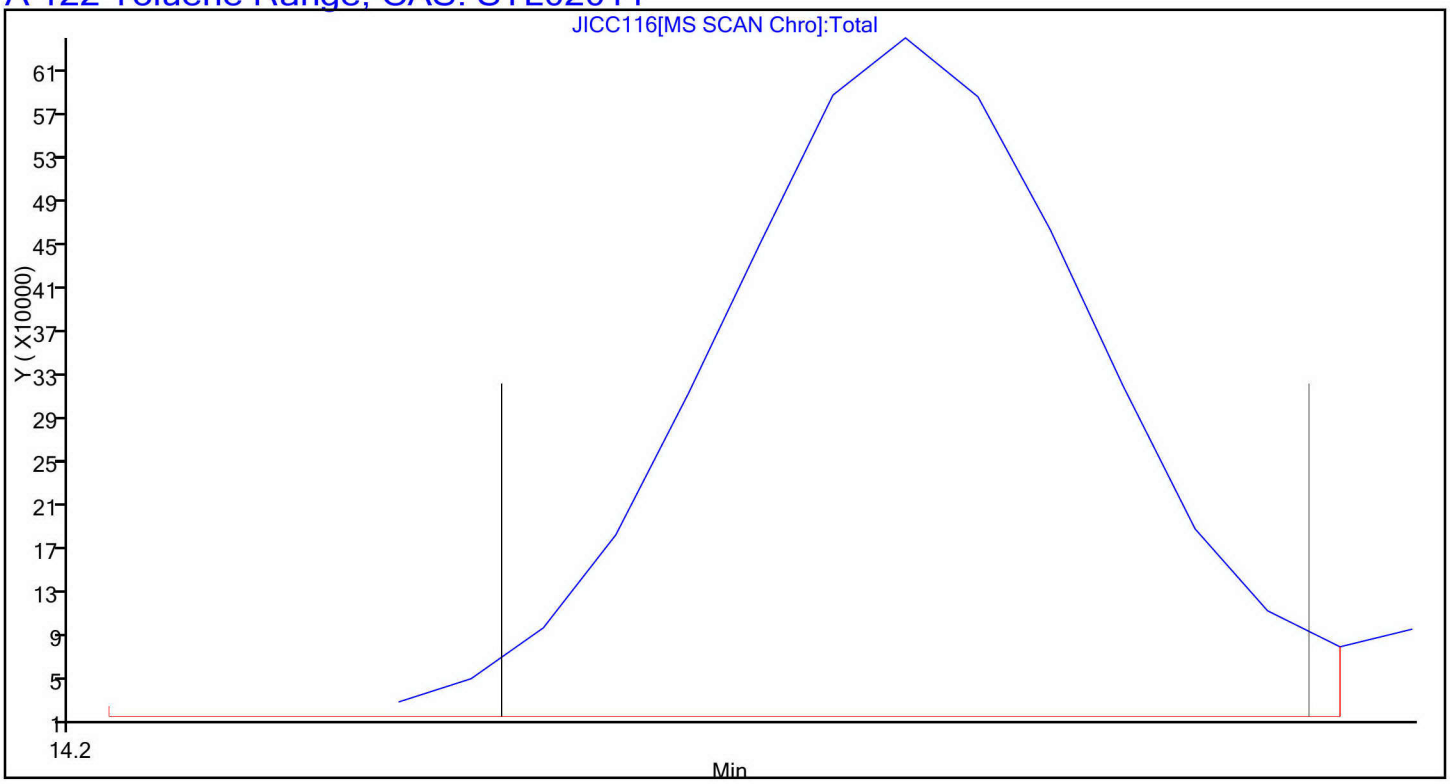
Report Date: 14-Mar-2014 14:47:03 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC116.D				
Injection Date:	11-Mar-2014 17:11:30	Instrument ID:	MJ		
Lims ID:	ICIS L6	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	12	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 Toluene Range, CAS: STL02011



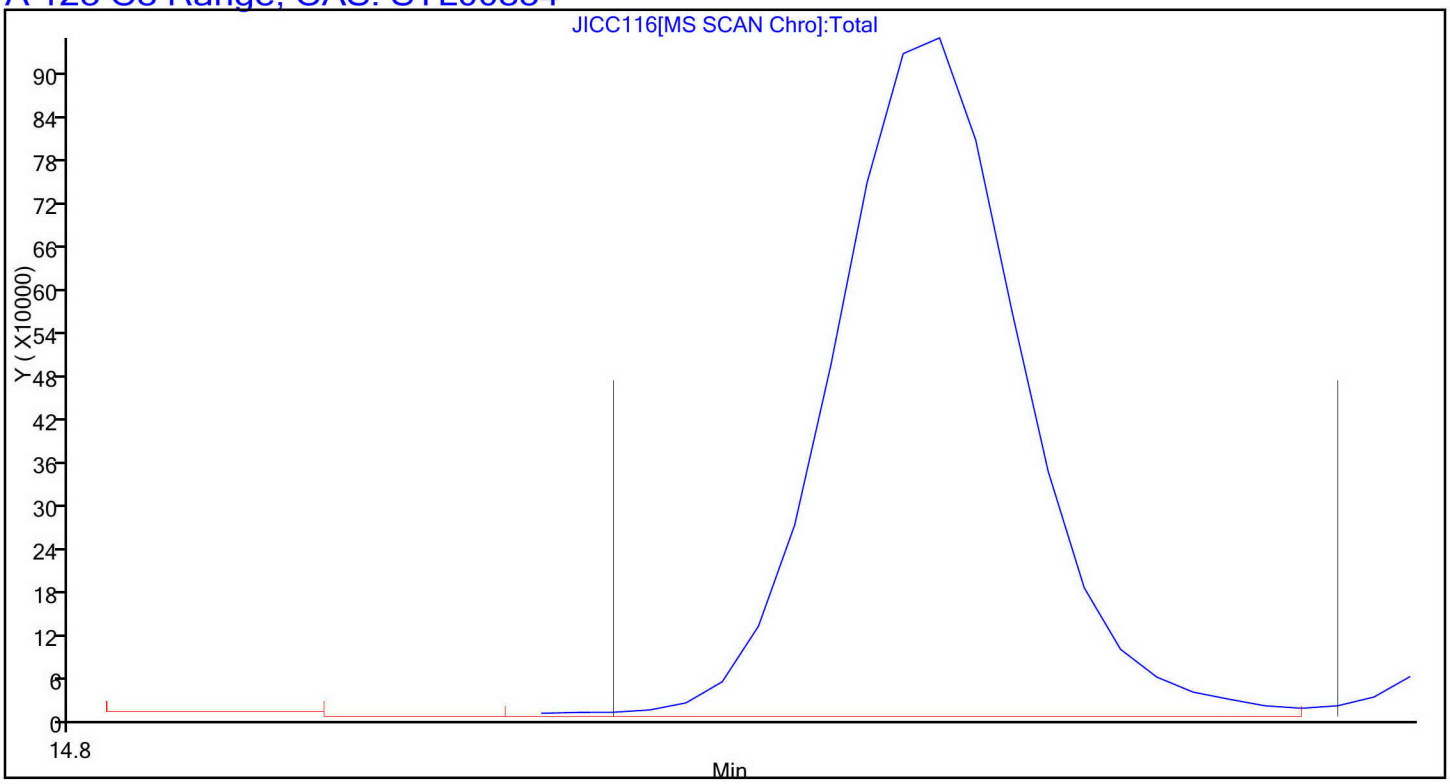
Report Date: 14-Mar-2014 14:47:03 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC116.D				
Injection Date:	11-Mar-2014 17:11:30	Instrument ID:	MJ		
Lims ID:	ICIS L6	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	12	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 123 C8 Range, CAS: STL00834



May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC117.D
Lims ID: IC L7 Lab Sample ID:
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 11-Mar-2014 18:06:30 ALS Bottle#: 13 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: ICAL7,,1,7,,ICAL 4
Misc. Info.: J031114I,TO15,,140-0000516-008
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub3

Method: \\KNXCHROM\ChromData\MJ\20140311-516.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Mar-2014 14:44:57 Calib Date: 11-Mar-2014 19:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 14-Mar-2014 14:44:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.391	9.392	-0.001	93	348015	4.00	
* 2 1,4-Difluorobenzene	114	11.548	11.547	0.001	92	1571787	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.206	16.208	-0.002	87	1348573	4.00	
$ 5 4-Bromofluorobenzene (Surr)	95	17.826	17.825	0.001	89	982151	4.12	
6 Chlorodifluoromethane	67	3.957	3.960	-0.003	97	127336	3.55	
7 Propene	41	3.973	3.973	0.0	99	380299	3.56	
8 Dichlorodifluoromethane	85	4.027	4.029	-0.002	100	1288306	3.74	
9 Chloromethane	52	4.232	4.230	0.002	99	142083	3.63	
10 1,2-Dichloro-1,1,2,2-tetrafluoro	135	4.237	4.238	-0.001	90	1010496	3.88	
11 Acetaldehyde	44	4.398	4.398	0.0	98	590590	17.2	
12 Vinyl chloride	62	4.420	4.419	0.001	99	481131	3.73	
14 Butadiene	54	4.517	4.517	0.0	66	332507	3.71	
13 Butane	43	4.517	4.517	0.0	85	651614	3.55	
15 Bromomethane	94	4.872	4.871	0.001	99	483336	3.68	
16 Chloroethane	64	5.028	5.027	0.001	99	220811	3.72	
17 Ethanol	31	5.119	5.122	-0.003	95	536616	19.2	
18 Vinyl bromide	106	5.356	5.357	-0.001	97	427699	3.83	
19 2-Methylbutane	43	5.410	5.411	-0.001	92	537867	3.64	
20 Trichlorofluoromethane	101	5.646	5.647	-0.001	97	1161422	3.84	
21 Acrolein	56	5.646	5.650	-0.004	24	99357	3.50	
22 Acetonitrile	40	5.716	5.720	-0.004	99	106520	3.39	
23 Acetone	58	5.770	5.776	-0.006	91	119169	2.41	
24 Isopropyl alcohol	45	5.851	5.858	-0.007	98	503623	3.86	
25 Pentane	72	5.883	5.884	-0.001	98	73196	3.91	
26 Ethyl ether	31	6.050	6.059	-0.009	94	329259	3.62	
27 1,1-Dichloroethene	96	6.400	6.399	0.001	98	372110	3.81	
28 2-Methyl-2-propanol	59	6.475	6.487	-0.012	94	583041	3.62	
29 Acrylonitrile	53	6.496	6.498	-0.002	93	192415	3.72	
30 1,1,2-Trichloro-1,2,2-trifluoroe	101	6.582	6.586	-0.004	95	813723	3.88	
31 Methylene Chloride	84	6.760	6.759	0.001	95	352418	3.79	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.776	6.778	-0.002	92	355060	3.67	
33 Carbon disulfide	76	6.943	6.942	0.001	99	1258326	3.84	
34 trans-1,2-Dichloroethene	96	7.610	7.609	0.001	99	451426	3.84	
35 2-Methylpentane	43	7.631	7.631	0.0	95	1006835	3.75	
36 Methyl tert-butyl ether	73	7.728	7.738	-0.010	96	673998	3.79	
37 1,1-Dichloroethane	63	8.040	8.041	-0.001	100	703411	3.83	
38 Vinyl acetate	43	8.137	8.141	-0.004	100	596834	3.71	
39 2-Butanone (MEK)	72	8.594	8.601	-0.007	100	125222	3.80	
40 Hexane	56	8.643	8.642	0.001	88	346825	3.71	
41 cis-1,2-Dichloroethene	96	9.052	9.052	0.0	94	388357	3.87	
42 Ethyl acetate	43	9.224	9.229	-0.005	99	549427	3.83	
43 Chloroform	83	9.401	9.403	-0.002	96	755016	3.72	
44 Tetrahydrofuran	42	9.805	9.816	-0.011	94	291715	3.62	
45 1,1,1-Trichloroethane	97	10.450	10.450	0.0	96	807351	3.82	
46 1,2-Dichloroethane	62	10.547	10.547	0.0	96	473508	3.88	
47 n-Butanol	31	10.945	10.958	-0.013	89	133536	3.89	
48 Benzene	78	11.031	11.033	-0.002	97	1059675	3.93	
49 Cyclohexane	69	11.042	11.040	0.002	93	212371	3.99	
50 Carbon tetrachloride	117	11.058	11.059	-0.001	99	893077	4.01	
51 2,3-Dimethylpentane	71	11.150	11.148	0.002	91	243353	3.82	
52 Thiophene	84	11.300	11.297	0.003	96	650293	3.90	
53 Isooctane	57	11.774	11.771	0.003	98	1747868	3.80	
54 n-Heptane	71	12.129	12.130	-0.001	92	367648	3.85	
55 1,2-Dichloropropane	63	12.215	12.214	0.001	85	352739	3.87	
56 Trichloroethene	130	12.252	12.252	0.0	93	487687	3.73	
57 Dibromomethane	93	12.333	12.332	0.001	92	456395	3.80	
59 Dichlorobromomethane	83	12.473	12.472	0.001	99	749991	3.94	
58 1,4-Dioxane	88	12.473	12.483	-0.010	37	131505	4.03	
60 Methyl methacrylate	41	12.548	12.548	0.0	91	333332	4.08	
61 Methylcyclohexane	83	13.011	13.013	-0.002	96	683968	3.77	
62 4-Methyl-2-pentanone (MIBK)	43	13.377	13.382	-0.005	98	661355	4.01	
63 cis-1,3-Dichloropropene	75	13.447	13.448	-0.001	94	507092	3.92	
64 trans-1,3-Dichloropropene	75	14.124	14.126	-0.002	97	446194	3.99	
65 Toluene	91	14.264	14.262	0.002	94	985546	3.94	
66 1,1,2-Trichloroethane	83	14.329	14.328	0.001	97	313466	3.95	
67 2-Methylthiophene	97	14.415	14.413	0.002	97	895031	3.98	
68 3-Methylthiophene	97	14.614	14.612	0.002	99	900038	3.99	
69 2-Hexanone	58	14.689	14.694	-0.005	93	329061	4.02	
70 n-Octane	85	14.926	14.928	-0.002	93	363887	3.96	
71 Chlorodibromomethane	129	15.028	15.027	0.001	96	735197	4.20	
72 Ethylene Dibromide	107	15.319	15.317	0.002	98	539062	3.97	
73 Tetrachloroethene	129	15.394	15.393	0.001	93	437989	3.76	
75 Chlorobenzene	112	16.255	16.256	-0.001	94	827157	3.87	
74 2,3-Dimethylheptane	43	16.260	16.260	0.0	94	1076318	3.91	
76 Ethylbenzene	91	16.534	16.536	-0.002	98	1067867	3.86	
77 2-Ethylthiophene	97	16.637	16.638	-0.001	98	856076	3.95	
78 m-Xylene & p-Xylene	91	16.696	16.696	0.0	99	1665289	7.47	
79 n-Nonane	57	17.099	17.098	0.001	92	701033	4.04	
81 Bromoform	173	17.148	17.149	-0.001	94	603733	4.37	
80 Styrene	104	17.158	17.157	0.001	97	638753	4.17	
82 o-Xylene	91	17.218	17.220	-0.002	96	854151	3.78	
83 1,1,2,2-Tetrachloroethane	83	17.535	17.534	0.001	99	731970	3.96	

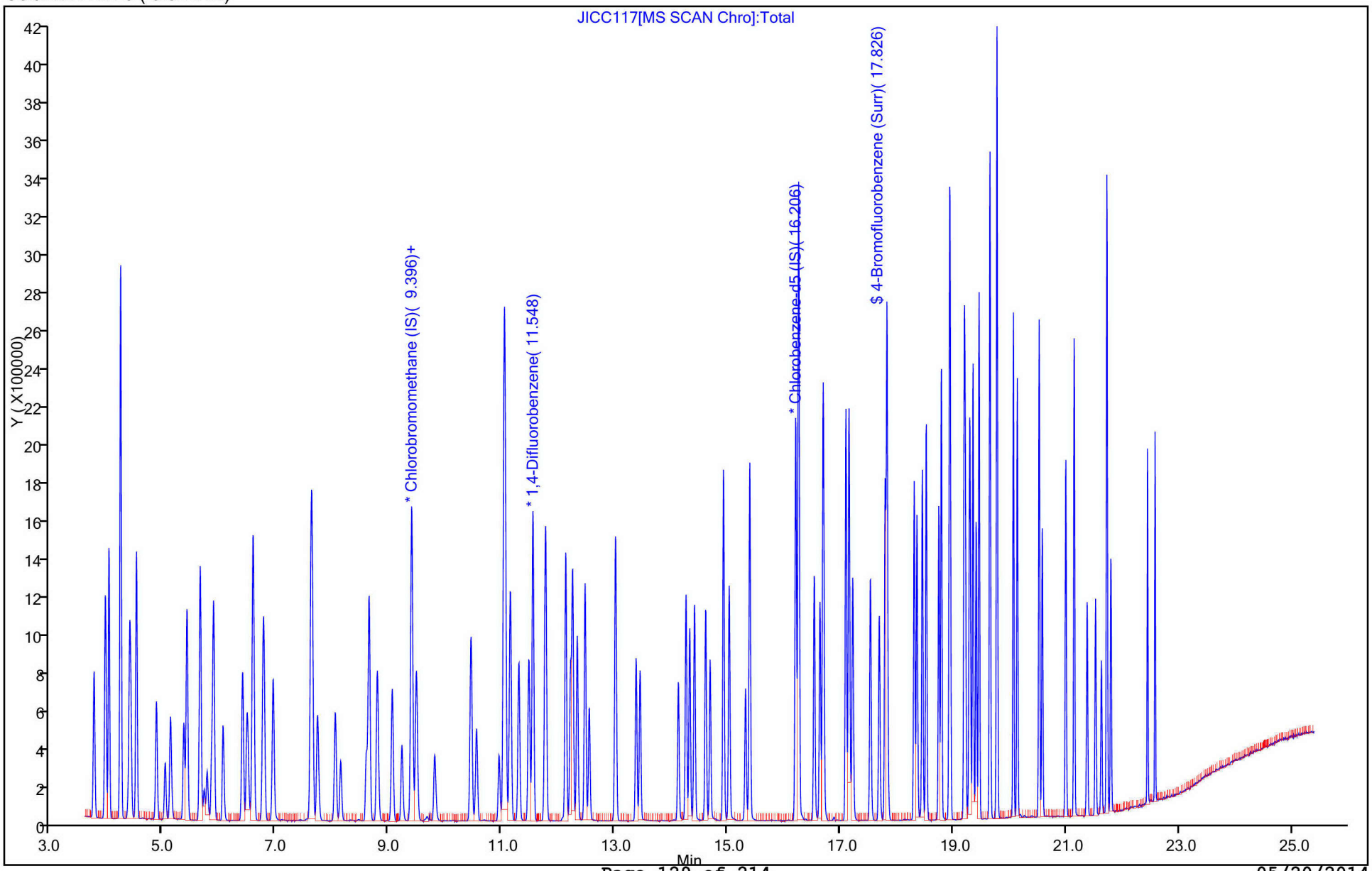
Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
84 1,2,3-Trichloropropane	110	17.691	17.690	0.001	97	174026	3.93	
85 Isopropylbenzene	105	17.793	17.793	0.0	96	1246662	3.87	
86 N-Propylbenzene	120	18.310	18.310	0.0	98	337130	3.97	
87 2-Chlorotoluene	126	18.358	18.357	0.001	97	335960	3.79	
88 4-Ethyltoluene	105	18.455	18.454	0.001	97	1212360	4.04	
89 1,3,5-Trimethylbenzene	120	18.525	18.524	0.001	93	586616	3.89	
90 Alpha Methyl Styrene	118	18.745	18.745	0.0	86	498439	4.61	
91 n-Decane	57	18.794	18.793	0.001	89	760833	4.11	
92 tert-Butylbenzene	119	18.939	18.937	0.002	88	1160846	3.94	
93 1,2,4-Trimethylbenzene	105	18.950	18.949	0.001	94	1046672	4.00	
94 sec-Butylbenzene	105	19.197	19.196	0.001	98	1534847	3.99	
95 1,3-Dichlorobenzene	146	19.219	19.217	0.002	99	649208	3.77	
96 Benzyl chloride	91	19.289	19.288	0.001	98	804987	4.12	
97 1,4-Dichlorobenzene	146	19.300	19.302	-0.002	94	593980	3.71	
98 4-Isopropyltoluene	119	19.353	19.352	0.001	88	1253285	4.07	
99 1,2,3-Trimethylbenzene	105	19.407	19.409	-0.002	98	842178	3.95	
100 Butylcyclohexane	83	19.461	19.460	0.001	94	943677	3.87	
101 2,3-Dihydroindene	117	19.655	19.653	0.002	89	948230	3.96	
102 1,2-Dichlorobenzene	146	19.655	19.653	0.002	82	646950	3.84	
103 n-Butylbenzene	91	19.778	19.777	0.001	97	1183694	4.14	
104 Indene	116	19.778	19.781	-0.003	86	918630	4.39	
105 Undecane	57	20.069	20.068	0.001	96	752219	4.04	
106 1,2-Dimethyl-4-Ethylbenzene	119	20.139	20.138	0.001	96	1174726	4.07	
108 1,2,4,5-Tetramethylbenzene	119	20.526	20.525	0.001	97	1242657	4.28	
107 1,2,3,5-Tetramethylbenzene	119	20.580	20.582	-0.002	95	763734	4.03	
109 1,2,3,4-Tetramethylbenzene	119	20.999	20.998	0.001	97	969881	4.13	
110 Dodecane	57	21.145	21.148	-0.003	95	748275	3.88	
111 1,2,4-Trichlorobenzene	180	21.376	21.379	-0.003	94	317385	4.24	
112 Naphthalene	128	21.527	21.527	0.0	99	840765	3.96	
113 Benzo(b)thiophene	134	21.629	21.631	-0.002	99	569891	3.96	
114 Hexachlorobutadiene	225	21.726	21.729	-0.003	84	564546	3.69	
115 1,2,3-Trichlorobenzene	180	21.801	21.800	0.001	96	366981	3.79	
116 2-Methylnaphthalene	142	22.447	22.449	-0.003	96	634411	28.1	
117 1-Methylnaphthalene	142	22.581	22.583	-0.002	96	631891	27.2	
139 Isopropyl ether	45	8.788	8.794	-0.006	97	915837	NR	
142 Tert-butyl ethyl ether	59	9.482	9.487	-0.005	96	861034	NR	
140 Tert-amyl methyl ether	73	11.478	11.482	-0.004	88	814994	NR	
A 118 C6 Range	1	8.643	8.573 -	8.713	0	3810714	3.75	
A 122 Toluene Range	1	14.264	14.234 -	14.294	0	2348373	3.85	
A 123 C8 Range	1	14.926	14.878 -	14.974	0	3391784	3.59	
S 124 Xylenes, Total	100				0		11.2	

Report Date: 14-Mar-2014 14:44:57 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC117.D				
Injection Date:	11-Mar-2014 18:06:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L7	Lab Sample ID:		Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



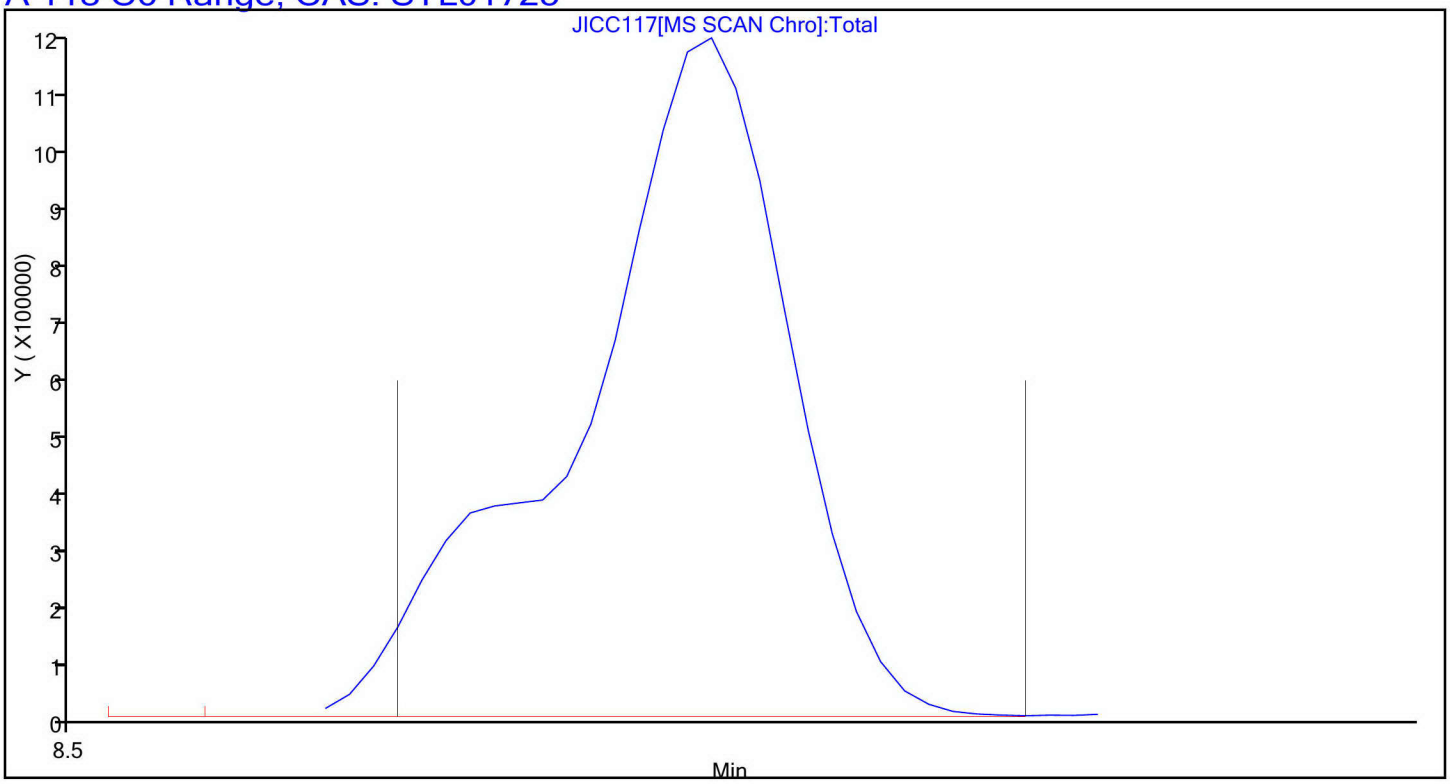
Report Date: 14-Mar-2014 14:44:57 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC117.D				
Injection Date:	11-Mar-2014 18:06:30	Instrument ID:	MJ		
Lims ID:	IC L7	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	13	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725



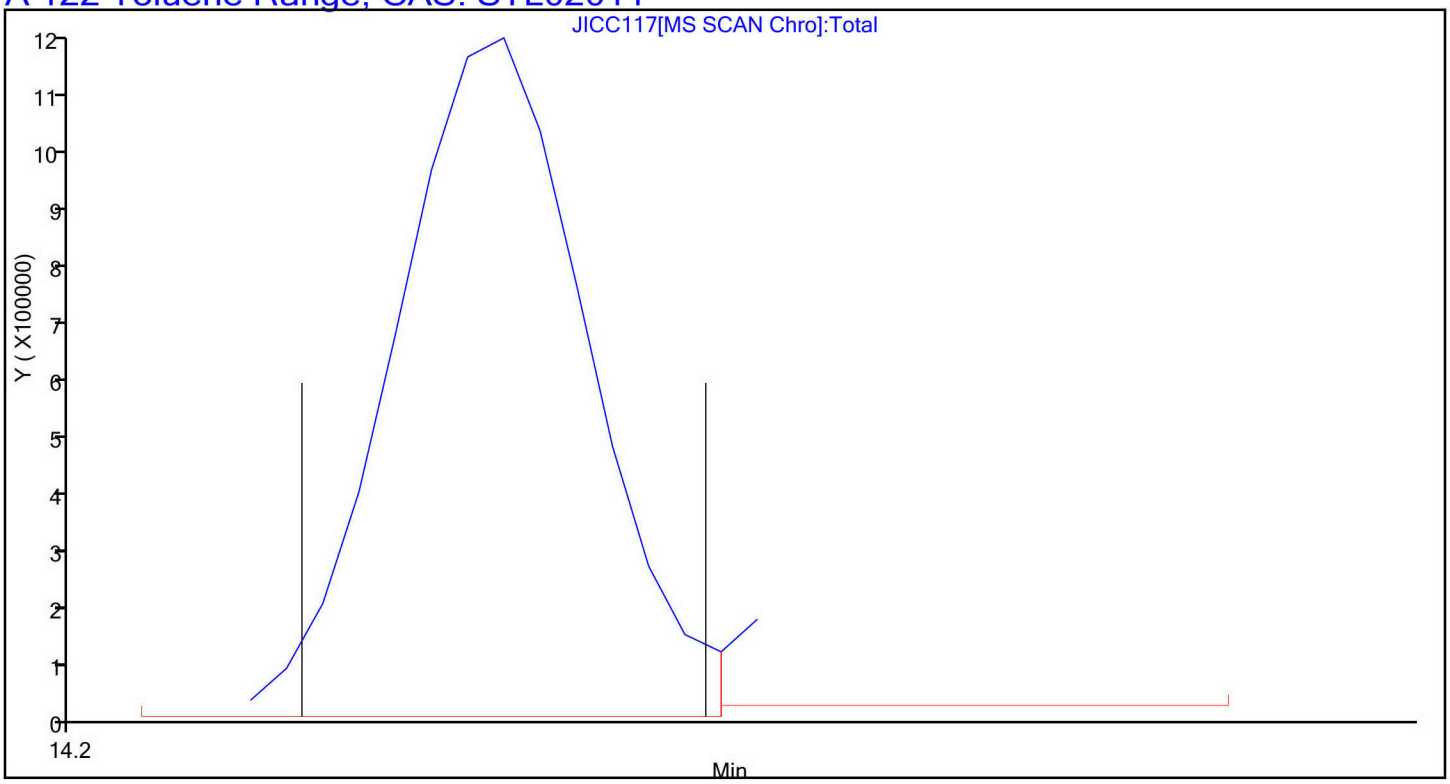
Report Date: 14-Mar-2014 14:44:57 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC117.D				
Injection Date:	11-Mar-2014 18:06:30	Instrument ID:	MJ		
Lims ID:	IC L7	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	13	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 Toluene Range, CAS: STL02011



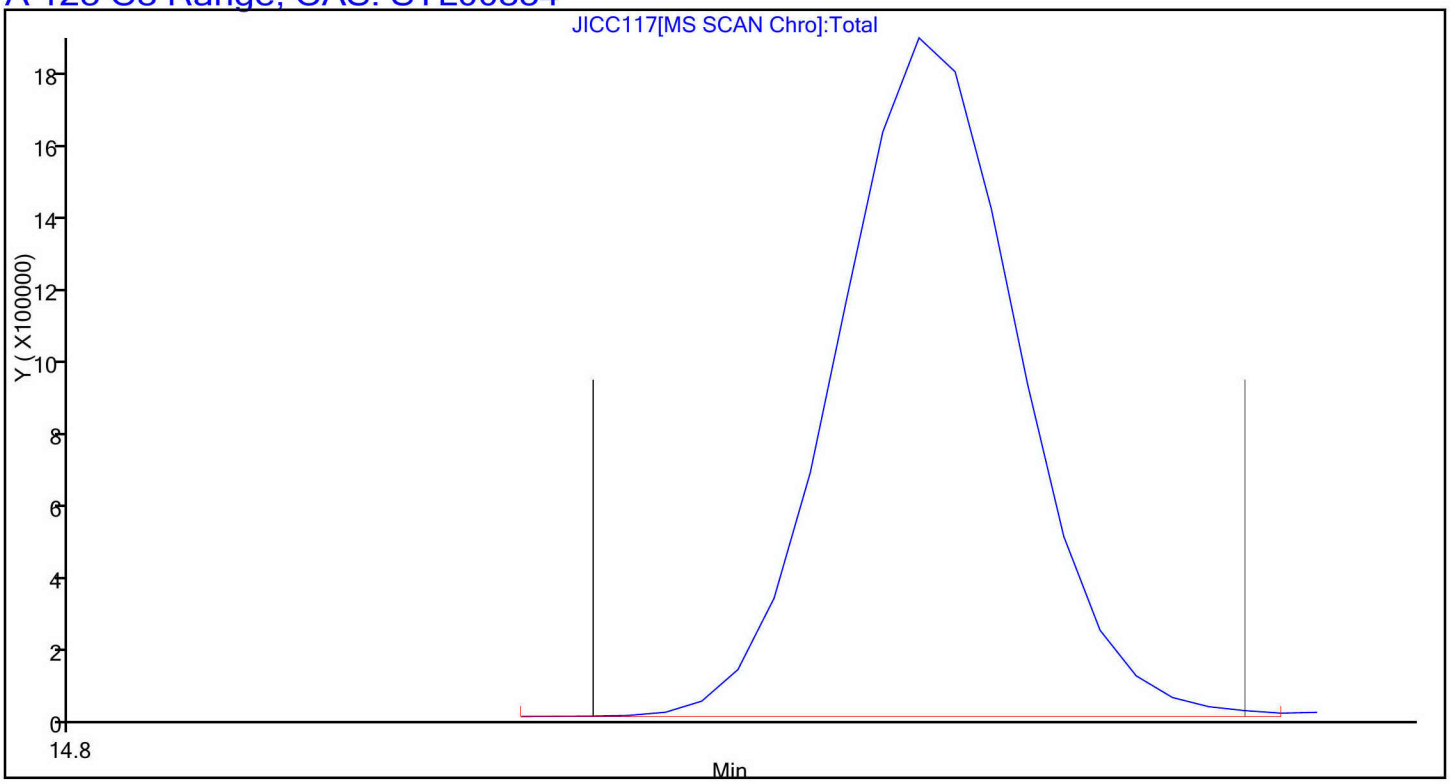
Report Date: 14-Mar-2014 14:44:57 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC117.D				
Injection Date:	11-Mar-2014 18:06:30	Instrument ID:	MJ		
Lims ID:	IC L7	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	13	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 123 C8 Range, CAS: STL00834



May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC118.D
Lims ID: IC L8 Lab Sample ID:
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 11-Mar-2014 19:02:30 ALS Bottle#: 14 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: ICAL8,,1,8,,ICAL 8
Misc. Info.: J031114I,TO15,,140-0000516-009
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub3

Method: \\KNXCHROM\ChromData\MJ\20140311-516.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Mar-2014 14:44:50 Calib Date: 11-Mar-2014 19:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 14-Mar-2014 14:44:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.397	9.392	0.005	91	318482	4.00	
* 2 1,4-Difluorobenzene	114	11.549	11.547	0.002	92	1412691	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.208	16.208	0.0	87	1299560	4.00	
$ 5 4-Bromofluorobenzene (Surr)	95	17.827	17.825	0.002	89	938909	4.08	
6 Chlorodifluoromethane	67	3.959	3.960	-0.001	97	267278	8.13	
7 Propene	41	3.969	3.973	-0.004	99	770175	7.89	
8 Dichlorodifluoromethane	85	4.029	4.029	0.0	99	2653935	8.41	
9 Chloromethane	52	4.228	4.230	-0.002	98	285173	7.96	
10 1,2-Dichloro-1,1,2,2-tetrafluoro	135	4.238	4.238	0.0	88	2110535	8.86	
11 Acetaldehyde	44	4.400	4.398	0.002	96	1285979	40.9	
12 Vinyl chloride	62	4.416	4.419	-0.003	99	984783	8.34	
14 Butadiene	54	4.518	4.517	0.001	68	680934	8.30	
13 Butane	43	4.518	4.517	0.001	85	1303426	7.76	
15 Bromomethane	94	4.873	4.871	0.002	99	1011303	8.42	
16 Chloroethane	64	5.029	5.027	0.002	99	455037	8.38	
17 Ethanol	31	5.126	5.122	0.004	94	988374	38.7	
18 Vinyl bromide	106	5.357	5.357	0.0	98	901463	8.83	
19 2-Methylbutane	43	5.411	5.411	0.0	92	1083786	8.01	
20 Trichlorofluoromethane	101	5.648	5.647	0.001	99	2393900	8.64	
21 Acrolein	56	5.648	5.650	-0.002	51	250642	9.64	
22 Acetonitrile	40	5.718	5.720	-0.002	99	251140	8.75	
23 Acetone	58	5.772	5.776	-0.004	77	235590	5.20	
24 Isopropyl alcohol	45	5.858	5.858	0.0	98	1005537	8.41	
25 Pentane	72	5.884	5.884	0.0	98	151771	8.86	
26 Ethyl ether	31	6.051	6.059	-0.008	94	699710	8.40	
27 1,1-Dichloroethene	96	6.401	6.399	0.002	98	763429	8.54	
28 2-Methyl-2-propanol	59	6.482	6.487	-0.005	94	1230118	8.35	
29 Acrylonitrile	53	6.498	6.498	0.0	92	432058	9.13	
30 1,1,2-Trichloro-1,2,2-trifluoroe	101	6.584	6.586	-0.002	96	1646524	8.57	
31 Methylene Chloride	84	6.761	6.759	0.002	94	670417	7.87	

May 23, 2014

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.783	6.778	0.005	94	664240	7.49	
33 Carbon disulfide	76	6.944	6.942	0.002	99	2556516	8.53	
34 trans-1,2-Dichloroethene	96	7.611	7.609	0.002	99	850575	7.90	
35 2-Methylpentane	43	7.633	7.631	0.002	96	1918287	7.81	
36 Methyl tert-butyl ether	73	7.730	7.738	-0.008	96	1374295	8.45	
37 1,1-Dichloroethane	63	8.042	8.041	0.001	100	1269839	7.56	
38 Vinyl acetate	43	8.138	8.141	-0.003	100	1340341	9.10	
39 2-Butanone (MEK)	72	8.596	8.601	-0.005	100	243895	8.09	
40 Hexane	56	8.644	8.642	0.002	90	651848	7.61	
41 cis-1,2-Dichloroethene	96	9.053	9.052	0.001	94	706076	7.68	
42 Ethyl acetate	43	9.225	9.229	-0.004	99	1084225	8.26	
43 Chloroform	83	9.408	9.403	0.005	97	1379316	7.43	
44 Tetrahydrofuran	42	9.806	9.816	-0.010	93	599765	8.13	
45 1,1,1-Trichloroethane	97	10.452	10.450	0.002	96	1426505	7.38	
46 1,2-Dichloroethane	62	10.548	10.547	0.001	96	840072	7.67	
47 n-Butanol	31	10.947	10.958	-0.011	86	287181	9.30	
48 Benzene	78	11.033	11.033	0.0	97	1886757	7.78	
49 Cyclohexane	69	11.043	11.040	0.003	90	372992	7.80	
50 Carbon tetrachloride	117	11.060	11.059	0.001	99	1616119	8.07	
51 2,3-Dimethylpentane	71	11.151	11.148	0.003	92	450381	7.88	
52 Thiophene	84	11.302	11.297	0.005	96	1166754	7.79	
53 Isooctane	57	11.775	11.771	0.004	98	3277019	7.92	
54 n-Heptane	71	12.130	12.130	0.0	91	706282	8.24	
55 1,2-Dichloropropane	63	12.216	12.214	0.002	85	610860	7.46	
56 Trichloroethene	130	12.254	12.252	0.002	96	953846	8.11	
57 Dibromomethane	93	12.334	12.332	0.002	93	853084	7.91	
59 Dichlorobromomethane	83	12.474	12.472	0.002	99	1438067	8.41	
58 1,4-Dioxane	88	12.474	12.483	-0.009	36	263409	8.97	
60 Methyl methacrylate	41	12.544	12.548	-0.004	91	682355	9.28	
61 Methylcyclohexane	83	13.012	13.013	-0.001	96	1256319	7.70	
62 4-Methyl-2-pentanone (MIBK)	43	13.378	13.382	-0.004	97	1423315	9.61	
63 cis-1,3-Dichloropropene	75	13.448	13.448	0.0	94	928432	7.99	
64 trans-1,3-Dichloropropene	75	14.126	14.126	0.0	97	879585	8.17	
65 Toluene	91	14.266	14.262	0.004	94	1869974	7.76	
66 1,1,2-Trichloroethane	83	14.330	14.328	0.002	96	586633	7.68	
67 2-Methylthiophene	97	14.416	14.413	0.003	97	1636492	7.55	
68 3-Methylthiophene	97	14.615	14.612	0.003	99	1654764	7.61	
69 2-Hexanone	58	14.691	14.694	-0.003	94	755508	9.57	
70 n-Octane	85	14.927	14.928	-0.001	92	718344	8.12	
71 Chlorodibromomethane	129	15.030	15.027	0.003	95	1496245	8.87	
72 Ethylene Dibromide	107	15.320	15.317	0.003	98	1055365	8.06	
73 Tetrachloroethene	129	15.395	15.393	0.002	95	851426	7.58	
75 Chlorobenzene	112	16.256	16.256	0.0	92	1616541	7.85	
74 2,3-Dimethylheptane	43	16.261	16.260	0.001	91	1960561	7.39	
76 Ethylbenzene	91	16.536	16.536	0.0	98	2251254	8.45	
77 2-Ethylthiophene	97	16.638	16.638	0.0	97	1757131	8.42	
78 m-Xylene & p-Xylene	91	16.697	16.696	0.001	98	3582524	16.7	
79 n-Nonane	57	17.101	17.098	0.003	90	1384118	8.28	
81 Bromoform	173	17.149	17.149	0.0	94	1345387	10.1	
80 Styrene	104	17.160	17.157	0.003	97	1446724	9.80	
82 o-Xylene	91	17.219	17.220	-0.001	97	1860295	8.54	
83 1,1,2,2-Tetrachloroethane	83	17.536	17.534	0.002	99	1658051	9.32	

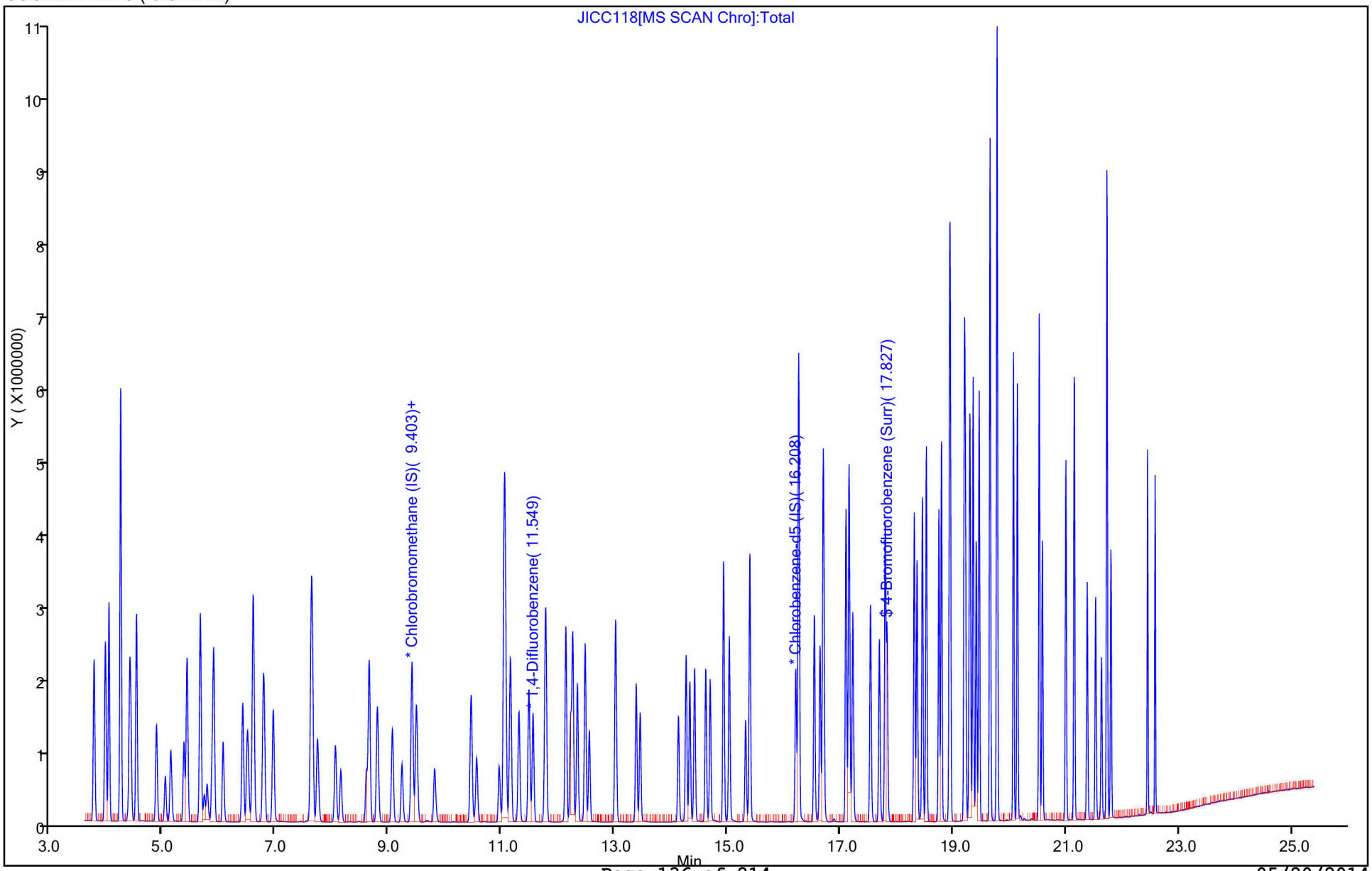
Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
84 1,2,3-Trichloropropane	110	17.692	17.690	0.002	97	398010	9.32	
85 Isopropylbenzene	105	17.795	17.793	0.002	96	2789508	8.99	
86 N-Propylbenzene	120	18.311	18.310	0.001	99	814479	9.95	
87 2-Chlorotoluene	126	18.359	18.357	0.002	96	748591	8.76	
88 4-Ethyltoluene	105	18.456	18.454	0.002	97	2848420	9.84	
89 1,3,5-Trimethylbenzene	120	18.526	18.524	0.002	94	1440763	9.90	
90 Alpha Methyl Styrene	118	18.747	18.745	0.002	86	1265706	12.1	
91 n-Decane	57	18.795	18.793	0.002	90	1630218	9.15	
92 tert-Butylbenzene	119	18.940	18.937	0.003	88	2882125	10.1	
93 1,2,4-Trimethylbenzene	105	18.951	18.949	0.002	90	2560408	10.1	
94 sec-Butylbenzene	105	19.199	19.196	0.003	97	3698797	9.99	
95 1,3-Dichlorobenzene	146	19.220	19.217	0.003	98	1658482	10.0	
96 Benzyl chloride	91	19.290	19.288	0.002	99	2044904	10.8	
97 1,4-Dichlorobenzene	146	19.301	19.302	-0.001	95	1570678	10.2	
98 4-Isopropyltoluene	119	19.355	19.352	0.003	87	3044134	10.3	
99 1,2,3-Trimethylbenzene	105	19.408	19.409	-0.001	97	2027503	9.86	
100 Butylcyclohexane	83	19.462	19.460	0.002	95	1999366	8.52	
101 2,3-Dihydroindene	117	19.656	19.653	0.003	90	2414878	10.5	
102 1,2-Dichlorobenzene	146	19.656	19.653	0.003	84	1699055	10.5	
103 n-Butylbenzene	91	19.780	19.777	0.003	97	2897714	10.5	
104 Indene	116	19.780	19.781	-0.001	86	2436478	12.1	
105 Undecane	57	20.070	20.068	0.002	94	1801735	10.0	
106 1,2-Dimethyl-4-Ethylbenzene	119	20.140	20.138	0.002	96	2922288	10.5	
108 1,2,4,5-Tetramethylbenzene	119	20.527	20.525	0.002	97	3137565	11.2	
107 1,2,3,5-Tetramethylbenzene	119	20.581	20.582	-0.001	96	1875036	10.3	
109 1,2,3,4-Tetramethylbenzene	119	21.001	20.998	0.003	97	2444837	10.8	
110 Dodecane	57	21.146	21.148	-0.002	96	1806559	9.72	
111 1,2,4-Trichlorobenzene	180	21.377	21.379	-0.002	92	910586	12.6	
112 Naphthalene	128	21.528	21.527	0.001	99	2216472	10.8	
113 Benzo(b)thiophene	134	21.630	21.631	-0.001	99	1529823	11.0	
114 Hexachlorobutadiene	225	21.727	21.729	-0.002	85	1511092	10.2	
115 1,2,3-Trichlorobenzene	180	21.797	21.800	-0.003	94	979161	10.5	
116 2-Methylnaphthalene	142	22.448	22.449	-0.001	96	1671920	76.9	
117 1-Methylnaphthalene	142	22.582	22.583	-0.001	95	1506542	67.2	
139 Isopropyl ether	45	8.789	8.794	-0.005	97	1812554	NR	
142 Tert-butyl ethyl ether	59	9.483	9.487	-0.004	95	1742738	NR	
140 Tert-amyl methyl ether	73	11.474	11.482	-0.008	92	1719215	NR	
A 118 C6 Range	1	8.639	8.563 -	8.714	0	7329744	7.88	
A 122 Toluene Range	1	14.266	14.236 -	14.296	0	4461089	7.59	
A 123 C8 Range	1	14.927	14.879 -	14.976	0	6451566	7.09	
S 124 Xylenes, Total	100				0		25.2	

Report Date: 14-Mar-2014 14:44:51 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC118.D				
Injection Date:	11-Mar-2014 19:02:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L8	Lab Sample ID:		Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



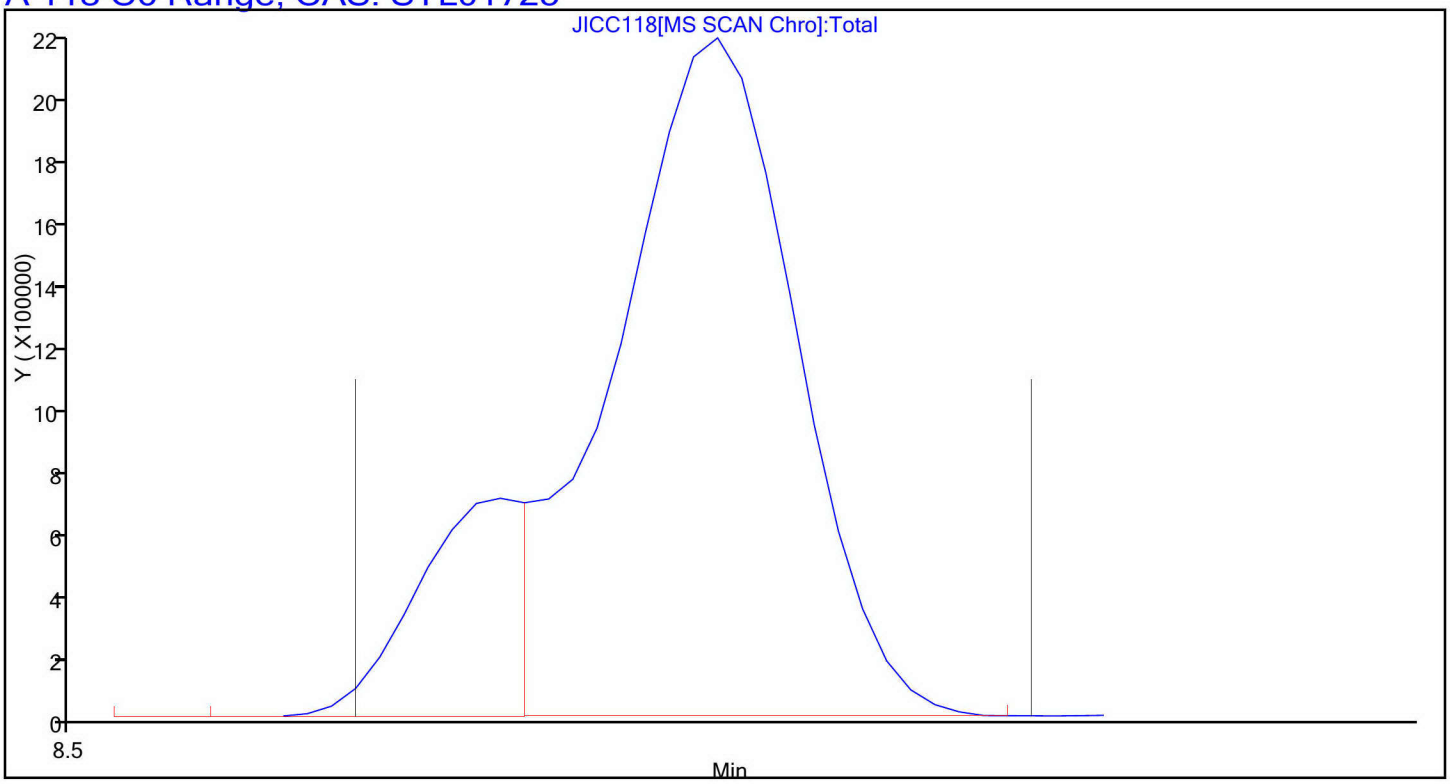
Report Date: 14-Mar-2014 14:44:51 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC118.D				
Injection Date:	11-Mar-2014 19:02:30	Instrument ID:	MJ		
Lims ID:	IC L8	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	14	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725



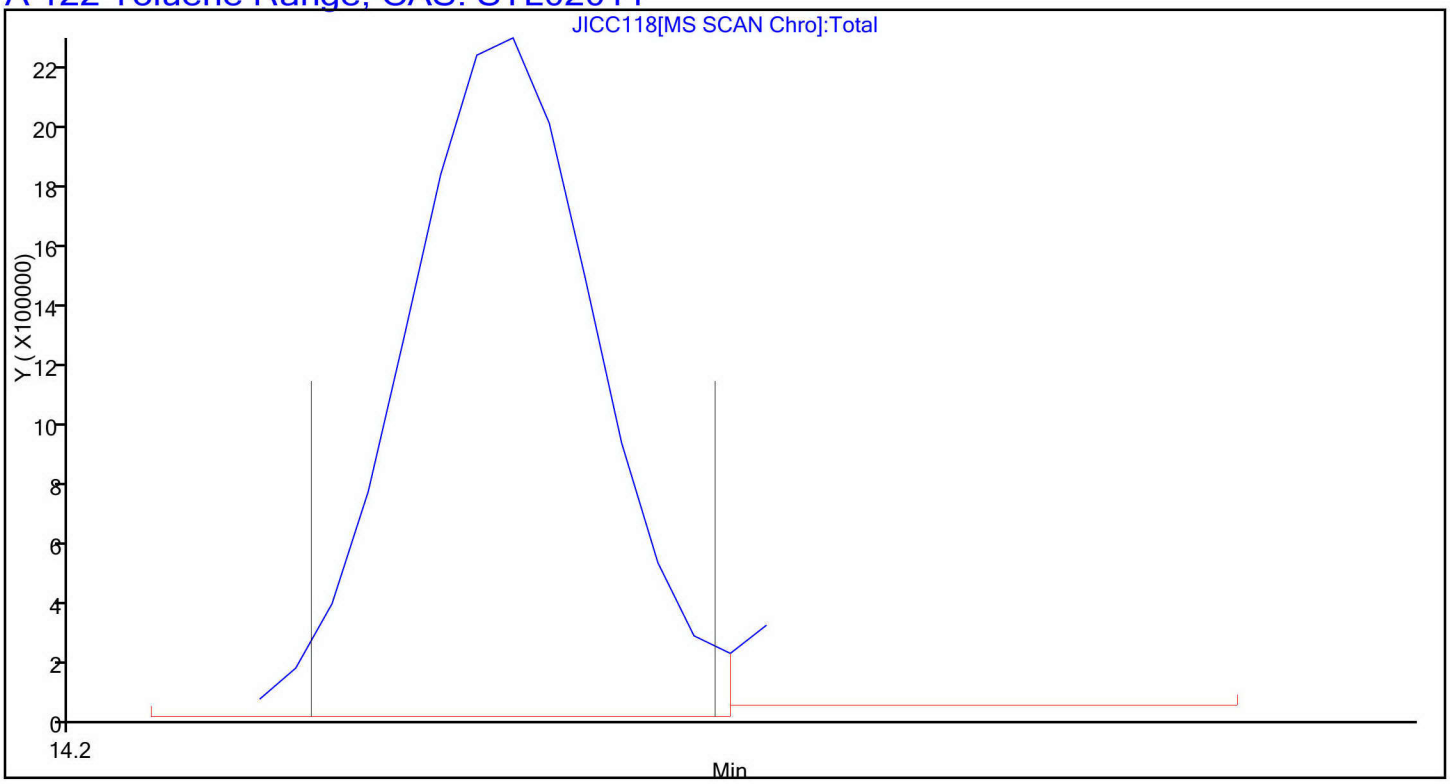
Report Date: 14-Mar-2014 14:44:51 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC118.D				
Injection Date:	11-Mar-2014 19:02:30	Instrument ID:	MJ		
Lims ID:	IC L8	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	14	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 Toluene Range, CAS: STL02011



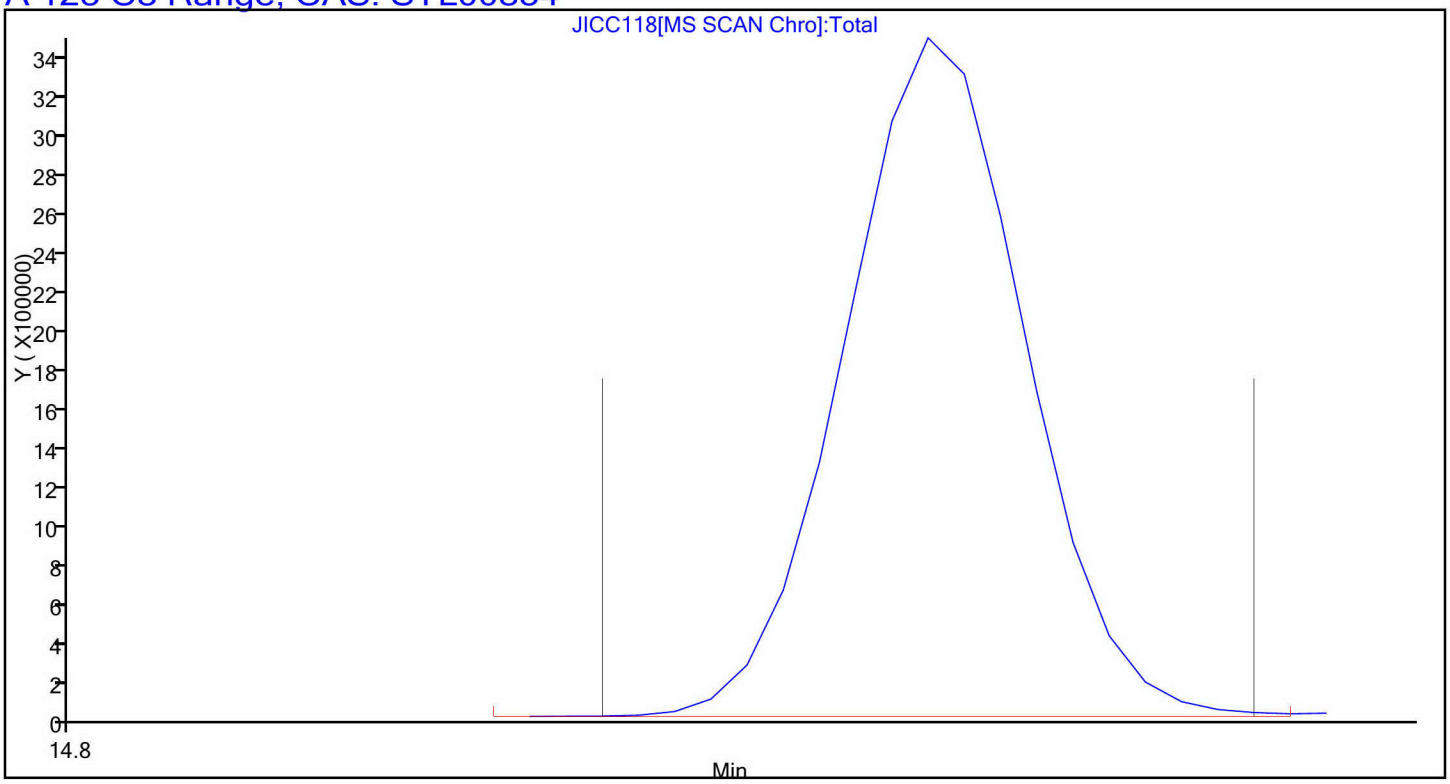
Report Date: 14-Mar-2014 14:44:51 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC118.D				
Injection Date:	11-Mar-2014 19:02:30	Instrument ID:	MJ		
Lims ID:	IC L8	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	14	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 123 C8 Range, CAS: STL00834



May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D
Lims ID: IC L9 Lab Sample ID:
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 11-Mar-2014 19:57:30 ALS Bottle#: 15 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: ICAL9,,1,9,,ICAL 16
Misc. Info.: J031114I,TO15,,140-0000516-010
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub3

Method: \\KNXCHROM\ChromData\MJ\20140311-516.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Mar-2014 14:44:43 Calib Date: 11-Mar-2014 19:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 14-Mar-2014 14:44:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.403	9.392	0.011	95	350824	4.00	
* 2 1,4-Difluorobenzene	114	11.555	11.547	0.008	89	1417201	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.214	16.208	0.006	86	1302893	4.00	
$ 5 4-Bromofluorobenzene (Surr)	95	17.828	17.825	0.003	89	942607	4.09	
6 Chlorodifluoromethane	67	3.959	3.960	-0.001	96	505684	14.0	
7 Propene	41	3.970	3.973	-0.003	99	1458925	13.6	
8 Dichlorodifluoromethane	85	4.029	4.029	0.0	98	4882515	14.1	
9 Chloromethane	52	4.228	4.230	-0.002	99	494916	12.5	
10 1,2-Dichloro-1,1,2,2-tetrafluoro	135	4.239	4.238	0.001	85	3992171	15.2	
11 Acetaldehyde	44	4.401	4.398	0.003	96	2205919	63.7	
12 Vinyl chloride	62	4.422	4.419	0.003	99	1770210	13.6	
14 Butadiene	54	4.519	4.517	0.002	69	1224939	13.6	
13 Butane	43	4.519	4.517	0.002	84	2267439	12.3	
15 Bromomethane	94	4.874	4.871	0.003	99	1918491	14.5	
16 Chloroethane	64	5.030	5.027	0.003	99	852776	14.3	
17 Ethanol	31	5.132	5.122	0.010	93	1841235	65.4	
18 Vinyl bromide	106	5.363	5.357	0.006	99	1753642	15.6	
19 2-Methylbutane	43	5.417	5.411	0.006	91	1976924	13.3	
20 Trichlorofluoromethane	101	5.654	5.647	0.007	99	4559353	14.9	
21 Acrolein	56	5.654	5.650	0.004	82	437980	15.3	
22 Acetonitrile	40	5.724	5.720	0.004	99	477609	15.1	
23 Acetone	58	5.772	5.776	-0.004	77	454598	9.12	
24 Isopropyl alcohol	45	5.864	5.858	0.006	86	1891993	14.4	
25 Pentane	72	5.891	5.884	0.007	98	289822	15.4	
26 Ethyl ether	31	6.057	6.059	-0.002	95	1293462	14.1	
27 1,1-Dichloroethene	96	6.407	6.399	0.008	100	1499326	15.2	
28 2-Methyl-2-propanol	59	6.493	6.487	0.006	94	2357157	14.5	
29 Acrylonitrile	53	6.504	6.498	0.006	94	846522	16.2	
30 1,1,2-Trichloro-1,2,2-trifluoroe	101	6.590	6.586	0.004	97	3210350	15.2	
31 Methylene Chloride	84	6.767	6.759	0.008	92	1306630	13.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.789	6.778	0.011	94	1253863	12.8	
33 Carbon disulfide	76	6.945	6.942	0.003	99	4789123	14.5	
34 trans-1,2-Dichloroethene	96	7.617	7.609	0.008	96	1705804	14.4	
35 2-Methylpentane	43	7.639	7.631	0.008	92	3402713	12.6	
36 Methyl tert-butyl ether	73	7.730	7.738	-0.008	96	2584260	14.4	
37 1,1-Dichloroethane	63	8.048	8.041	0.007	100	2513809	13.6	
38 Vinyl acetate	43	8.145	8.141	0.004	100	2572051	15.9	
39 2-Butanone (MEK)	72	8.597	8.601	-0.005	100	487204	14.7	
40 Hexane	56	8.650	8.642	0.008	90	1264226	13.4	
41 cis-1,2-Dichloroethene	96	9.059	9.052	0.007	93	1451411	14.3	
42 Ethyl acetate	43	9.231	9.229	0.002	99	2092150	14.5	
43 Chloroform	83	9.414	9.403	0.011	97	2790275	13.6	
44 Tetrahydrofuran	42	9.807	9.816	-0.009	93	1179659	14.5	
45 1,1,1-Trichloroethane	97	10.452	10.450	0.002	96	2968435	13.9	
46 1,2-Dichloroethane	62	10.555	10.547	0.008	95	1727411	15.7	
47 n-Butanol	31	10.958	10.958	0.0	86	562689	18.2	
48 Benzene	78	11.039	11.033	0.006	97	3816101	15.7	
49 Cyclohexane	69	11.044	11.040	0.004	82	734107	15.3	
50 Carbon tetrachloride	117	11.060	11.059	0.001	98	3477511	17.3	
51 2,3-Dimethylpentane	71	11.152	11.148	0.004	91	895905	15.6	
52 Thiophene	84	11.302	11.297	0.005	95	2407949	16.0	
53 Isooctane	57	11.776	11.771	0.005	97	6188593	14.9	
54 n-Heptane	71	12.136	12.130	0.006	89	1414497	16.4	
55 1,2-Dichloropropane	63	12.222	12.214	0.008	90	1374081	16.7	
56 Trichloroethene	130	12.260	12.252	0.008	94	2020928	17.1	
57 Dibromomethane	93	12.341	12.332	0.009	95	1782109	16.5	
59 Dichlorobromomethane	83	12.475	12.472	0.003	99	2968189	17.3	
58 1,4-Dioxane	88	12.475	12.483	-0.008	55	535040	18.2	
60 Methyl methacrylate	41	12.550	12.548	0.002	89	1312475	17.8	
61 Methylcyclohexane	83	13.018	13.013	0.005	97	2529310	15.5	
62 4-Methyl-2-pentanone (MIBK)	43	13.384	13.382	0.002	97	2713031	18.3	
63 cis-1,3-Dichloropropene	75	13.454	13.448	0.006	92	2069482	17.7	
64 trans-1,3-Dichloropropene	75	14.132	14.126	0.006	97	1963516	18.2	
65 Toluene	91	14.266	14.262	0.004	92	4086312	16.9	
66 1,1,2-Trichloroethane	83	14.331	14.328	0.003	97	1314579	17.2	
67 2-Methylthiophene	97	14.417	14.413	0.004	96	3652163	16.8	
68 3-Methylthiophene	97	14.616	14.612	0.004	98	3714685	17.0	
69 2-Hexanone	58	14.697	14.694	0.003	95	1451418	18.3	
70 n-Octane	85	14.934	14.928	0.006	89	1469379	16.6	
71 Chlorodibromomethane	129	15.036	15.027	0.009	94	3347546	19.8	
72 Ethylene Dibromide	107	15.321	15.317	0.004	98	2473337	18.8	
73 Tetrachloroethene	129	15.396	15.393	0.003	97	1888055	16.8	
75 Chlorobenzene	112	16.262	16.256	0.006	97	3736744	18.1	
74 2,3-Dimethylheptane	43	16.268	16.260	0.008	85	3283977	12.3	
76 Ethylbenzene	91	16.542	16.536	0.006	97	4621160	17.3	
77 2-Ethylthiophene	97	16.644	16.638	0.006	96	3695934	17.7	
78 m-Xylene & p-Xylene	91	16.703	16.696	0.007	96	7138010	33.1	
79 n-Nonane	57	17.101	17.098	0.003	85	2746405	16.4	
81 Bromoform	173	17.155	17.149	0.006	95	3400531	25.5	
80 Styrene	104	17.161	17.157	0.004	96	3101488	21.0	
82 o-Xylene	91	17.225	17.220	0.005	99	3743538	17.1	
83 1,1,2,2-Tetrachloroethane	83	17.537	17.534	0.003	99	3301073	18.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
84 1,2,3-Trichloropropane	110	17.693	17.690	0.003	96	836915	19.6	
85 Isopropylbenzene	105	17.801	17.793	0.008	95	5530866	17.8	
86 N-Propylbenzene	120	18.312	18.310	0.002	97	1741082	21.2	
87 2-Chlorotoluene	126	18.360	18.357	0.003	93	1667404	19.5	
88 4-Ethyltoluene	105	18.457	18.454	0.003	96	5599605	19.3	
89 1,3,5-Trimethylbenzene	120	18.527	18.524	0.003	95	3015712	20.7	
90 Alpha Methyl Styrene	118	18.748	18.745	0.003	86	2701607	25.8	
91 n-Decane	57	18.796	18.793	0.003	91	3036195	17.0	
92 tert-Butylbenzene	119	18.941	18.937	0.004	89	5759135	20.2	
93 1,2,4-Trimethylbenzene	105	18.952	18.949	0.003	89	5045591	19.9	
94 sec-Butylbenzene	105	19.199	19.196	0.003	96	7092519	19.1	
95 1,3-Dichlorobenzene	146	19.221	19.217	0.004	95	3841334	23.1	
96 Benzyl chloride	91	19.291	19.288	0.003	95	4188073	22.2	
97 1,4-Dichlorobenzene	146	19.307	19.302	0.005	94	3642996	23.5	
98 4-Isopropyltoluene	119	19.355	19.352	0.003	84	5986441	20.1	
99 1,2,3-Trimethylbenzene	105	19.415	19.409	0.006	96	3990183	19.4	
100 Butylcyclohexane	83	19.463	19.460	0.003	96	4012634	17.1	
101 2,3-Dihydroindene	117	19.657	19.653	0.004	90	4915942	21.3	
102 1,2-Dichlorobenzene	146	19.657	19.653	0.004	89	3809042	23.4	
103 n-Butylbenzene	91	19.780	19.777	0.003	95	5428724	19.7	
104 Indene	116	19.786	19.781	0.005	88	4978609	24.6	
105 Undecane	57	20.071	20.068	0.003	91	3299916	18.3	
106 1,2-Dimethyl-4-Ethylbenzene	119	20.141	20.138	0.003	91	5841120	20.9	
108 1,2,4,5-Tetramethylbenzene	119	20.528	20.525	0.003	94	6339016	22.6	
107 1,2,3,5-Tetramethylbenzene	119	20.587	20.582	0.005	95	3871454	21.1	
109 1,2,3,4-Tetramethylbenzene	119	21.002	20.998	0.004	94	5109192	22.5	
110 Dodecane	57	21.152	21.148	0.004	96	3052464	16.4	
111 1,2,4-Trichlorobenzene	180	21.384	21.379	0.005	93	2137430	29.5	
112 Naphthalene	128	21.529	21.527	0.002	98	4750981	23.2	
113 Benzo(b)thiophene	134	21.631	21.631	0.0	99	3355982	24.2	
114 Hexachlorobutadiene	225	21.733	21.729	0.004	82	3388138	22.9	
115 1,2,3-Trichlorobenzene	180	21.803	21.800	0.003	95	2025463	21.7	
116 2-Methylnaphthalene	142	22.449	22.449	0.0	96	969606	44.5	
117 1-Methylnaphthalene	142	22.583	22.583	0.0	96	616839	27.4	
139 Isopropyl ether	45	8.796	8.794	0.002	96	3380667	NR	
142 Tert-butyl ethyl ether	59	9.484	9.487	-0.003	94	3237327	NR	
140 Tert-amyl methyl ether	73	11.480	11.482	-0.002	93	3205213	NR	
A 118 C6 Range	1	8.635	8.553 -	8.736	0	14110311	13.8	
A 122 Toluene Range	1	14.266	14.236 -	14.296	0	9697293	16.5	
A 123 C8 Range	1	14.928	14.880 -	14.977	0	12490633	13.7	
S 124 Xylenes, Total	100				0		50.3	

Report Date: 14-Mar-2014 14:44:44 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

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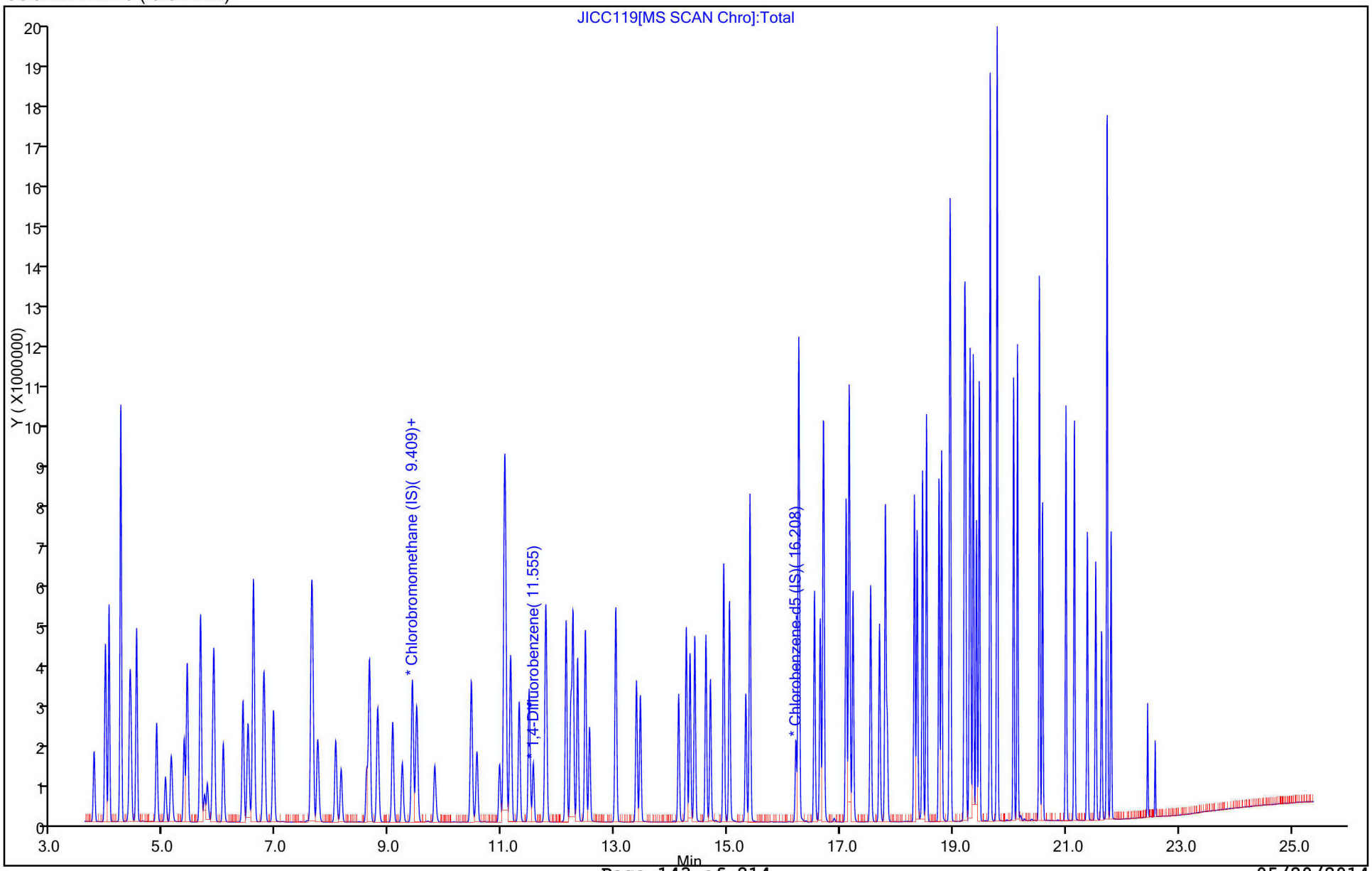
Lims ID:	IC L9	Lab Sample ID:		Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



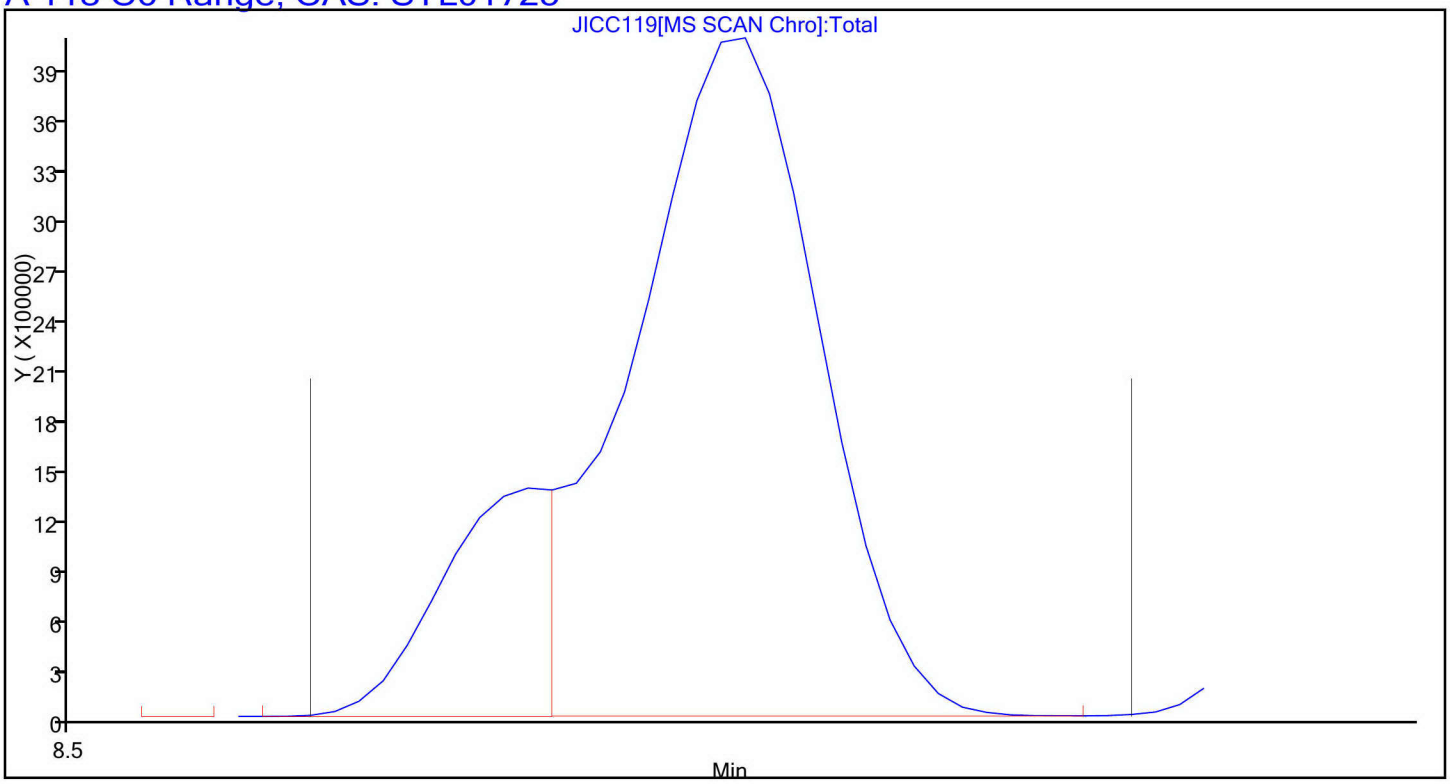
Report Date: 14-Mar-2014 14:44:44 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D				
Injection Date:	11-Mar-2014 19:57:30	Instrument ID:	MJ		
Lims ID:	IC L9	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	15	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725



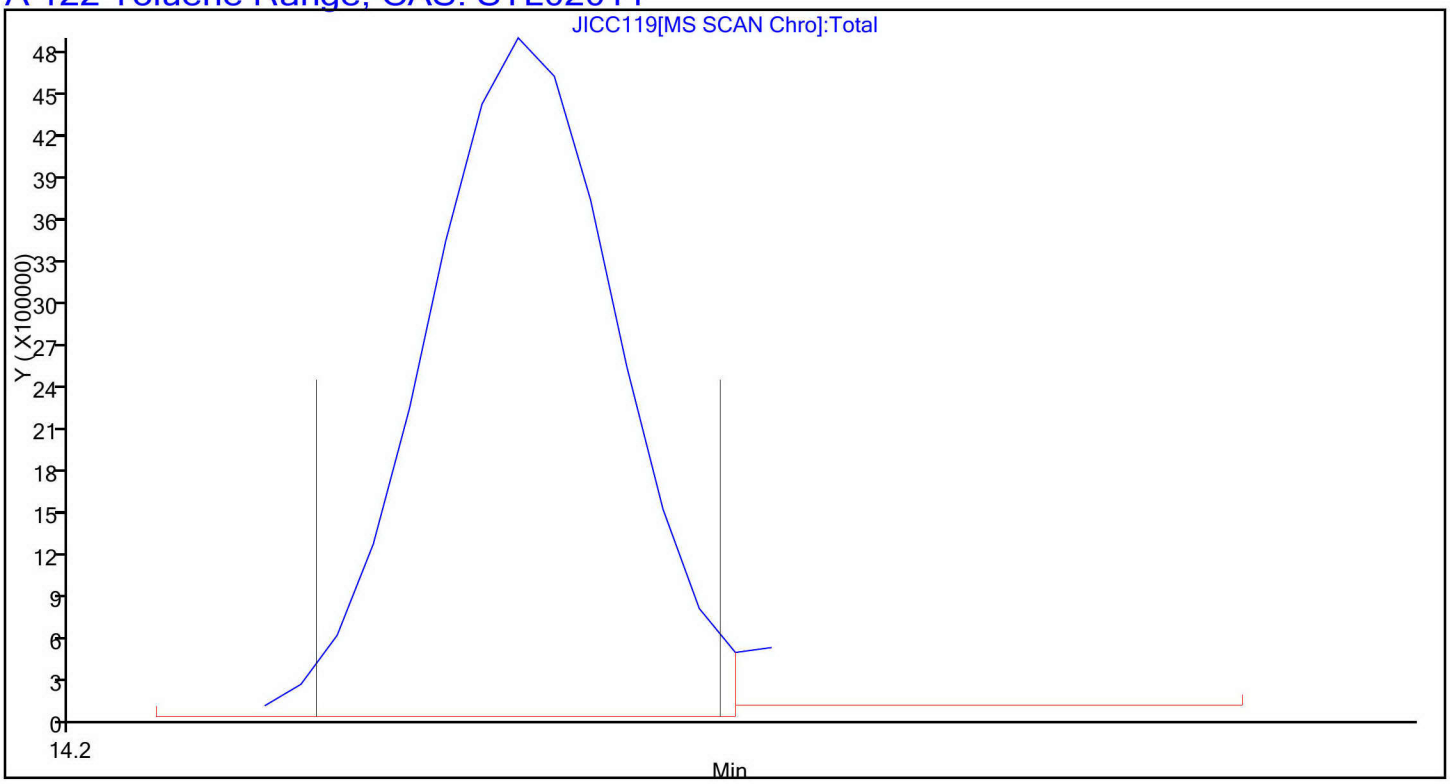
Report Date: 14-Mar-2014 14:44:44 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D				
Injection Date:	11-Mar-2014 19:57:30	Instrument ID:	MJ		
Lims ID:	IC L9	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	15	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 Toluene Range, CAS: STL02011



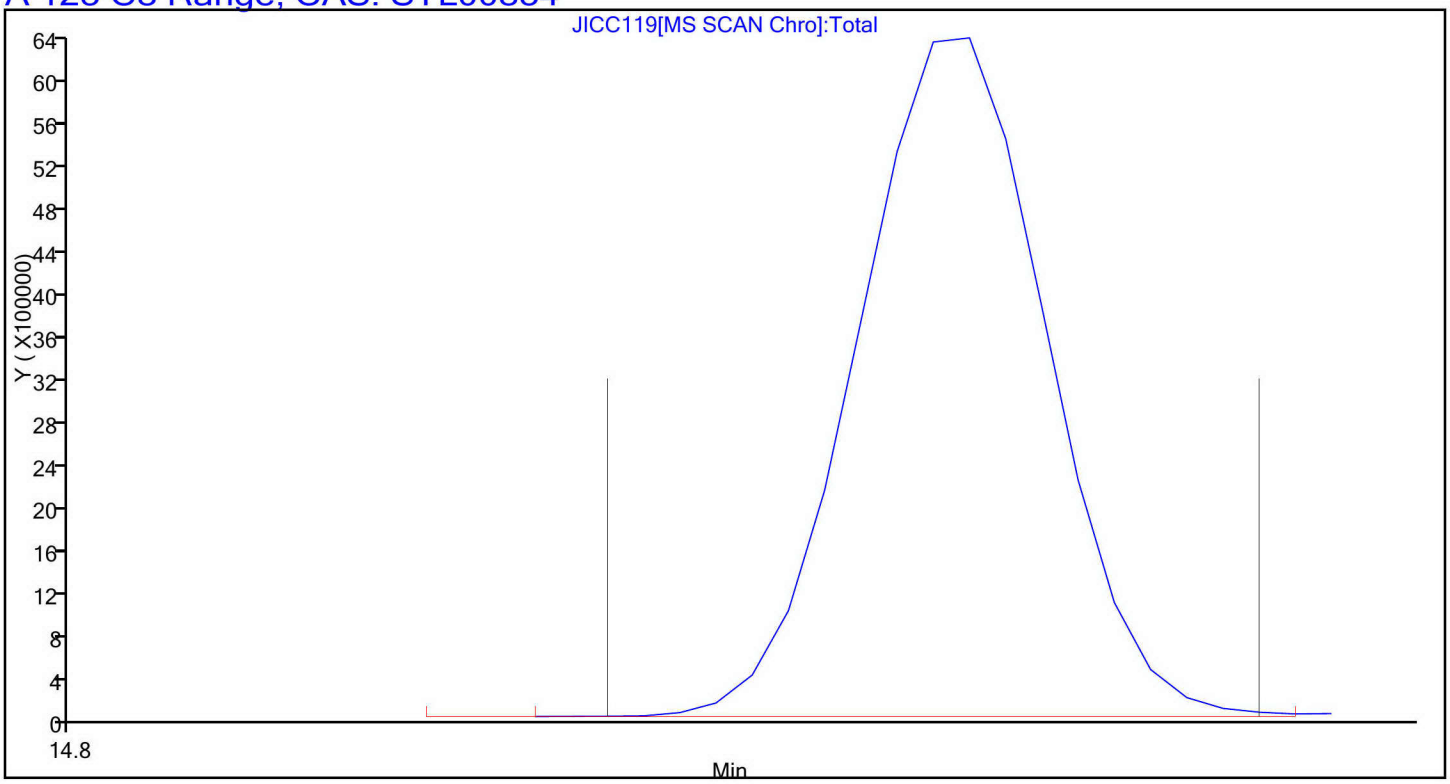
Report Date: 14-Mar-2014 14:44:44 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D				
Injection Date:	11-Mar-2014 19:57:30	Instrument ID:	MJ		
Lims ID:	IC L9	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	15	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 123 C8 Range, CAS: STL00834



FORM VII

AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Lab Sample ID: ICV 140-946/14 Calibration Date: 03/11/2014 23:33

Instrument ID: MJ Calib Start Date: 03/11/2014 12:40

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/11/2014 19:57

Lab File ID: JLCSC11.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4128	0.3927		1.90	2.00	-4.9	35.0
Propene	Ave	1.227	1.098		1.79	2.00	-10.4	35.0
Dichlorodifluoromethane	Ave	3.962	3.635		1.83	2.00	-8.3	35.0
Chloromethane	Ave	0.4501	0.4065		1.81	2.00	-9.7	35.0
1,2-Dichloro-1,1,2,2-tetrafl uoroethane	Ave	2.990	3.017		2.02	2.00	0.9	35.0
Acetaldehyde	Ave	0.3947	0.3532		8.95	10.0	-10.5	80.0
Vinyl chloride	Ave	1.483	1.396		1.88	2.00	-5.9	35.0
1,3-Butadiene	Ave	1.030	1.004		1.95	2.00	-2.6	35.0
Butane	Ave	2.110	1.870		1.77	2.00	-11.4	35.0
Bromomethane	Ave	1.508	1.386		1.84	2.00	-8.1	35.0
Chloroethane	Ave	0.6822	0.6020		1.76	2.00	-11.8	35.0
Ethanol	Ave	0.3211	0.2779		8.65	10.0	-13.5	80.0
Vinyl bromide	Ave	1.283	1.299		2.03	2.00	1.3	35.0
2-Methylbutane	Ave	1.699	1.599		1.88	2.00	-5.9	35.0
Acrolein	Ave	0.3266	0.2252		1.38	2.00	-31.0	35.0
Trichlorofluoromethane	Ave	3.481	3.332		1.91	2.00	-4.3	35.0
Acetonitrile	Ave	0.3607	0.3021		1.68	2.00	-16.2	35.0
Acetone	Ave	0.5686	0.4096		1.44	2.00	-28.0	35.0
Isopropyl alcohol	Ave	1.501	1.466		1.95	2.00	-2.4	35.0
Pentane	Ave	0.2152	0.2069		1.92	2.00	-3.9	35.0
Ethyl ether	Ave	1.047	0.8811		1.68	2.00	-15.8	35.0
1,1-Dichloroethene	Ave	1.123	1.253		2.23	2.00	11.6	35.0
tert-Butyl alcohol	Ave	1.849	1.758		1.90	2.00	-5.0	35.0
Acrylonitrile	Ave	0.5945	0.5425		1.83	2.00	-8.7	35.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	2.412	2.678		2.22	2.00	11.1	35.0
Methylene Chloride	Ave	1.070	1.161		2.17	2.00	8.5	35.0
3-Chloropropene	Ave	1.113	1.032		1.86	2.00	-7.2	35.0
Carbon disulfide	Ave	3.763	3.823		2.03	2.00	1.6	35.0
trans-1,2-Dichloroethene	Ave	1.353	1.283		1.90	2.00	-5.1	35.0
2-Methylpentane	Ave	3.087	2.996		1.94	2.00	-2.9	80.0
Methyl tert-butyl ether	Ave	2.042	1.840		1.80	2.00	-9.9	35.0
1,1-Dichloroethane	Ave	2.111	2.102		1.99	2.00	-0.4	35.0
Vinyl acetate	Ave	1.849	1.657		1.79	2.00	-10.4	35.0
2-Butanone (MEK)	Ave	0.3786	0.3381		1.79	2.00	-10.7	35.0
Hexane	Ave	1.075	0.9854		1.83	2.00	-8.4	35.0
cis-1,2-Dichloroethene	Ave	1.155	1.171		2.03	2.00	1.4	35.0
Ethyl acetate	Ave	1.649	1.508		1.83	2.00	-8.6	35.0
Chloroform	Ave	2.331	2.280		1.96	2.00	-2.2	35.0
Tetrahydrofuran	Ave	0.9265	0.8140		1.76	2.00	-12.1	35.0
1,1,1-Trichloroethane	Ave	2.429	2.357		1.94	2.00	-3.0	35.0

FORM VII TO 15 LL

FORM VII

AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Lab Sample ID: ICV 140-946/14 Calibration Date: 03/11/2014 23:33

Instrument ID: MJ Calib Start Date: 03/11/2014 12:40

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/11/2014 19:57

Lab File ID: JLCSC11.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloroethane	Ave	0.3103	0.3053		1.97	2.00	-1.6	35.0
1-Butanol	Ave	0.0874	0.0831		1.90	2.00	-5.0	35.0
Benzene	Ave	0.6863	0.6700		1.95	2.00	-2.4	35.0
Cyclohexane	Ave	0.1354	0.1273		1.88	2.00	-6.0	35.0
Carbon tetrachloride	Ave	0.5669	0.5577		1.97	2.00	-1.6	35.0
2,3-Dimethylpentane	Ave	0.1619	0.1476		1.82	2.00	-8.9	80.0
Thiophene	Ave	0.4238	0.3980		1.88	2.00	-6.1	80.0
2,2,4-Trimethylpentane	Ave	1.172	1.096		1.87	2.00	-6.5	35.0
Heptane	Ave	0.2427	0.2273		1.87	2.00	-6.4	35.0
1,2-Dichloropropane	Ave	0.2320	0.2086		1.80	2.00	-10.1	35.0
Trichloroethene	Ave	0.3329	0.3084		1.85	2.00	-7.4	35.0
Dibromomethane	Ave	0.3053	0.2742		1.80	2.00	-10.2	35.0
Bromodichloromethane	Ave	0.4844	0.4604		1.90	2.00	-5.0	35.0
1,4-Dioxane	Ave	0.0831	0.0721		1.73	2.00	-13.3	35.0
Methyl methacrylate	Ave	0.2081	0.1844		1.77	2.00	-11.4	35.0
Methylcyclohexane	Ave	0.4620	0.4153		1.80	2.00	-10.1	80.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4193	0.3620		1.73	2.00	-13.7	35.0
cis-1,3-Dichloropropene	Ave	0.3291	0.2994		1.82	2.00	-9.0	35.0
trans-1,3-Dichloropropene	Ave	0.3315	0.2916		1.76	2.00	-12.0	35.0
Toluene	Ave	0.7420	0.6560		1.77	2.00	-11.6	35.0
1,1,2-Trichloroethane	Ave	0.2352	0.2032		1.73	2.00	-13.6	35.0
2-Methylthiophene	Ave	0.6668	0.5885		1.76	2.00	-11.8	80.0
3-Methylthiophene	Ave	0.6690	0.5758		1.72	2.00	-13.9	80.0
2-Hexanone	Ave	0.2430	0.2176		1.79	2.00	-10.5	35.0
Octane	Ave	0.2723	0.2524		1.85	2.00	-7.3	35.0
Dibromochloromethane	Ave	0.5191	0.4880		1.88	2.00	-6.0	35.0
1,2-Dibromoethane (EDB)	Ave	0.4030	0.3491		1.73	2.00	-13.4	35.0
Tetrachloroethene	Ave	0.3457	0.3028		1.75	2.00	-12.4	35.0
Chlorobenzene	Ave	0.6339	0.5280		1.67	2.00	-16.7	35.0
2,3-Dimethylheptane	Ave	0.8171	0.8009		1.96	2.00	-2.0	80.0
Ethylbenzene	Ave	0.8196	0.7195		1.76	2.00	-12.2	35.0
2-Ethylthiophene	Ave	0.6423	0.5532		1.72	2.00	-13.9	80.0
m-Xylene & p-Xylene	Ave	0.6614	0.5572		3.37	4.00	-15.7	35.0
Nonane	Ave	0.5146	0.4621		1.80	2.00	-10.2	35.0
Bromoform	Ave	0.4101	0.3532		1.72	2.00	-13.9	35.0
Styrene	Ave	0.4542	0.4097		1.80	2.00	-9.8	35.0
o-Xylene	Ave	0.6705	0.5779		1.72	2.00	-13.8	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5478	0.4775		1.74	2.00	-12.8	35.0
1,2,3-Trichloropropane	Ave	0.1314	0.1129		1.72	2.00	-14.1	35.0
Isopropylbenzene	Ave	0.9553	0.8094		1.69	2.00	-15.3	35.0
Propylbenzene	Ave	0.2519	0.2135		1.70	2.00	-15.2	35.0

FORM VII TO 15 LL

May 23, 2014

FORM VII

AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Lab Sample ID: ICV 140-946/14 Calibration Date: 03/11/2014 23:33

Instrument ID: MJ Calib Start Date: 03/11/2014 12:40

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/11/2014 19:57

Lab File ID: JLCSC11.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chlorotoluene	Ave	0.2629	0.2127		1.62	2.00	-19.1	35.0
4-Ethyltoluene	Ave	0.8909	0.7838		1.76	2.00	-12.0	35.0
1,3,5-Trimethylbenzene	Ave	0.4479	0.3817		1.70	2.00	-14.8	35.0
Alpha Methyl Styrene	Ave	0.3209	0.2911		1.81	2.00	-9.3	35.0
Decane	Ave	0.5485	0.4798		1.75	2.00	-12.5	35.0
tert-Butylbenzene	Ave	0.8748	0.7380		1.69	2.00	-15.6	35.0
1,2,4-Trimethylbenzene	Ave	0.7768	0.6716		1.73	2.00	-13.6	35.0
sec-Butylbenzene	Ave	1.140	0.9809		1.72	2.00	-14.0	35.0
1,3-Dichlorobenzene	Ave	0.5106	0.3857		1.51	2.00	-24.5	35.0
Benzyl chloride	Ave	0.5802	0.4785		1.65	2.00	-17.5	35.0
1,4-Dichlorobenzene	Ave	0.4752	0.3601		1.52	2.00	-24.2	35.0
4-Isopropyltoluene	Ave	0.9141	0.7905		1.73	2.00	-13.5	35.0
1,2,3-Trimethylbenzene	Ave	0.6330	0.5684		1.80	2.00	-10.2	80.0
Butylcyclohexane	Ave	0.7225	0.6145		1.70	2.00	-14.9	80.0
Indane	Ave	0.7098	0.6057		1.71	2.00	-14.7	80.0
1,2-Dichlorobenzene	Ave	0.4994	0.3813		1.53	2.00	-23.6	35.0
Butylbenzene	Ave	0.8482	0.6995		1.65	2.00	-17.5	35.0
Indene	Ave	0.6202	0.5555		1.79	2.00	-10.4	80.0
Undecane	Ave	0.5525	0.4806		1.74	2.00	-13.0	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.8571	0.7156		1.67	2.00	-16.5	80.0
1,2,4,5-Tetramethylbenzene	Ave	0.8611	0.7687		1.79	2.00	-10.7	80.0
1,2,3,5-Tetramethylbenzene	Ave	0.5621	0.4782		1.70	2.00	-14.9	80.0
1,2,3,4-Tetramethylbenzene	Ave	0.6963	0.6065		1.74	2.00	-12.9	80.0
Dodecane	Ave	0.5721	0.5050		1.77	2.00	-11.7	35.0
1,2,4-Trichlorobenzene	Ave	0.2222	0.1874		1.69	2.00	-15.7	35.0
Naphthalene	Ave	0.6294	0.5313		1.69	2.00	-15.6	35.0
Benzo(b)thiophene	Ave	0.4265	0.3579		1.68	2.00	-16.1	80.0
Hexachlorobutadiene	Ave	0.4540	0.3272		1.44	2.00	-27.9	35.0
1,2,3-Trichlorobenzene	Ave	0.2871	0.2381		1.66	2.00	-17.1	35.0
2-Methylnaphthalene	Ave	0.0669	0.0445		8.32	12.5	-33.5	80.0
1-Methylnaphthalene	Ave	0.0690	0.0474		8.59	12.5	-31.3	80.0
4-Bromofluorobenzene (Surr)	Ave	0.7075	0.7141		4.04	4.00	0.9	35.0

FORM VII TO 15 LL

May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JLCSC11.D
Lims ID: ICV Lab Sample ID: ICV 140-949/14-A
Client ID:
Sample Type: ICV
Inject. Date: 11-Mar-2014 23:33:30 ALS Bottle#: 1 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: LCS/ICV,,3,,,
Misc. Info.: J031114I,TO15,,140-0000516-014
Operator ID: 7126 Instrument ID: MJ
Sublist:

Method: \\KNXCHROM\ChromData\MJ\20140311-516.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Mar-2014 13:55:12 Calib Date: 11-Mar-2014 19:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: tajh Date: 12-Mar-2014 06:59:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.390	9.392	-0.002	93	326764	4.00	
* 2 1,4-Difluorobenzene	114	11.548	11.547	0.001	93	1541489	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.206	16.208	-0.002	87	1315171	4.00	
$ 5 4-Bromofluorobenzene (Surr)	95	17.825	17.825	0.0	89	939102	4.04	
6 Chlorodifluoromethane	67	3.957	3.960	-0.003	97	64162	1.90	
7 Propene	41	3.968	3.973	-0.005	99	179454	1.79	
8 Dichlorodifluoromethane	85	4.027	4.029	-0.002	100	593826	1.83	
9 Chloromethane	52	4.226	4.230	-0.004	98	66411	1.81	
10 1,2-Dichloro-1,1,2,2-tetrafluoro	135	4.237	4.238	-0.001	90	492863	2.02	
11 Acetaldehyde	44	4.393	4.398	-0.005	98	288501	8.95	
12 Vinyl chloride	62	4.414	4.419	-0.005	99	228060	1.88	
14 Butadiene	54	4.511	4.517	-0.006	92	164047	1.95	
13 Butane	43	4.517	4.517	0.0	89	305448	1.77	
15 Bromomethane	94	4.866	4.871	-0.005	99	226405	1.84	
16 Chloroethane	64	5.022	5.027	-0.005	99	98352	1.76	
17 Ethanol	31	5.114	5.122	-0.008	94	227027	8.65	
18 Vinyl bromide	106	5.350	5.357	-0.007	97	212311	2.03	
19 2-Methylbutane	43	5.410	5.411	-0.001	92	261226	1.88	
20 Trichlorofluoromethane	101	5.646	5.647	-0.001	98	544405	1.91	
21 Acrolein	56	5.641	5.650	-0.009	27	36793	1.38	
22 Acetonitrile	40	5.711	5.720	-0.009	100	49356	1.68	
23 Acetone	58	5.770	5.776	-0.006	84	66917	1.44	
24 Isopropyl alcohol	45	5.845	5.858	-0.013	97	239534	1.95	
25 Pentane	72	5.883	5.884	-0.001	97	33800	1.92	
26 Ethyl ether	31	6.050	6.059	-0.009	93	143950	1.68	
27 1,1-Dichloroethene	96	6.399	6.399	0.0	97	204737	2.23	
28 2-Methyl-2-propanol	59	6.469	6.487	-0.018	94	287155	1.90	
29 Acrylonitrile	53	6.491	6.498	-0.007	94	88630	1.83	
30 1,1,2-Trichloro-1,2,2-trifluoroe	101	6.582	6.586	-0.004	94	437601	2.22	
31 Methylene Chloride	84	6.760	6.759	0.001	95	189676	2.17	

May 23, 2014

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.776	6.778	-0.002	91	168678	1.86	
33 Carbon disulfide	76	6.937	6.942	-0.005	99	624567	2.03	
34 trans-1,2-Dichloroethene	96	7.604	7.609	-0.005	98	209642	1.90	
35 2-Methylpentane	43	7.631	7.631	0.0	95	489470	1.94	
36 Methyl tert-butyl ether	73	7.728	7.738	-0.010	96	300567	1.80	
37 1,1-Dichloroethane	63	8.040	8.041	-0.001	100	343423	1.99	
38 Vinyl acetate	43	8.137	8.141	-0.004	100	270800	1.79	
39 2-Butanone (MEK)	72	8.600	8.601	-0.001	100	55244	1.79	
40 Hexane	56	8.643	8.642	0.001	90	160988	1.83	
41 cis-1,2-Dichloroethene	96	9.051	9.052	-0.001	95	191302	2.03	
42 Ethyl acetate	43	9.224	9.229	-0.005	97	246331	1.83	
43 Chloroform	83	9.401	9.403	-0.002	88	372507	1.96	
44 Tetrahydrofuran	42	9.810	9.816	-0.006	94	132989	1.76	
45 1,1,1-Trichloroethane	97	10.450	10.450	0.0	96	385014	1.94	
46 1,2-Dichloroethane	62	10.547	10.547	0.0	95	235329	1.97	
47 n-Butanol	31	10.945	10.958	-0.013	87	64008	1.90	
48 Benzene	78	11.031	11.033	-0.002	97	516383	1.95	
49 Cyclohexane	69	11.042	11.040	0.002	92	98107	1.88	
50 Carbon tetrachloride	117	11.058	11.059	-0.001	97	429830	1.97	
51 2,3-Dimethylpentane	71	11.144	11.148	-0.004	92	113738	1.82	
52 Thiophene	84	11.300	11.297	0.003	96	306757	1.88	
53 Isooctane	57	11.768	11.771	-0.003	98	844794	1.87	
54 n-Heptane	71	12.129	12.130	-0.001	93	175150	1.87	
55 1,2-Dichloropropane	63	12.215	12.214	0.001	88	160801	1.80	
56 Trichloroethene	130	12.252	12.252	0.0	95	237727	1.85	
57 Dibromomethane	93	12.333	12.332	0.001	91	211308	1.80	
59 Dichlorobromomethane	83	12.473	12.472	0.001	99	354860	1.90	
58 1,4-Dioxane	88	12.478	12.483	-0.005	87	55564	1.73	
60 Methyl methacrylate	41	12.543	12.548	-0.005	91	142117	1.77	
61 Methylcyclohexane	83	13.011	13.013	-0.002	96	320093	1.80	
62 4-Methyl-2-pentanone (MIBK)	43	13.377	13.382	-0.005	98	278989	1.73	
63 cis-1,3-Dichloropropene	75	13.447	13.448	-0.001	95	230781	1.82	
64 trans-1,3-Dichloropropene	75	14.124	14.126	-0.002	99	191744	1.76	
65 Toluene	91	14.264	14.262	0.002	93	431398	1.77	
66 1,1,2-Trichloroethane	83	14.329	14.328	0.001	97	133590	1.73	
67 2-Methylthiophene	97	14.415	14.413	0.002	98	386959	1.76	
68 3-Methylthiophene	97	14.608	14.612	-0.004	99	378623	1.72	
69 2-Hexanone	58	14.689	14.694	-0.005	93	143062	1.79	
70 n-Octane	85	14.926	14.928	-0.002	95	165974	1.85	
71 Chlorodibromomethane	129	15.028	15.027	0.001	96	320894	1.88	
72 Ethylene Dibromide	107	15.319	15.317	0.002	98	229585	1.73	
73 Tetrachloroethene	129	15.394	15.393	0.001	92	199104	1.75	
75 Chlorobenzene	112	16.255	16.256	-0.001	84	347218	1.67	
74 2,3-Dimethylheptane	43	16.260	16.260	0.0	95	526675	1.96	
76 Ethylbenzene	91	16.534	16.536	-0.002	98	473153	1.76	
77 2-Ethylthiophene	97	16.637	16.638	-0.001	97	363744	1.72	
78 m-Xylene & p-Xylene	91	16.696	16.696	0.0	100	732866	3.37	
79 n-Nonane	57	17.099	17.098	0.001	93	303879	1.80	
81 Bromoform	173	17.148	17.149	-0.001	93	232231	1.72	
80 Styrene	104	17.158	17.157	0.001	98	269410	1.80	
82 o-Xylene	91	17.218	17.220	-0.002	99	380024	1.72	
83 1,1,2,2-Tetrachloroethane	83	17.530	17.534	-0.004	99	313972	1.74	

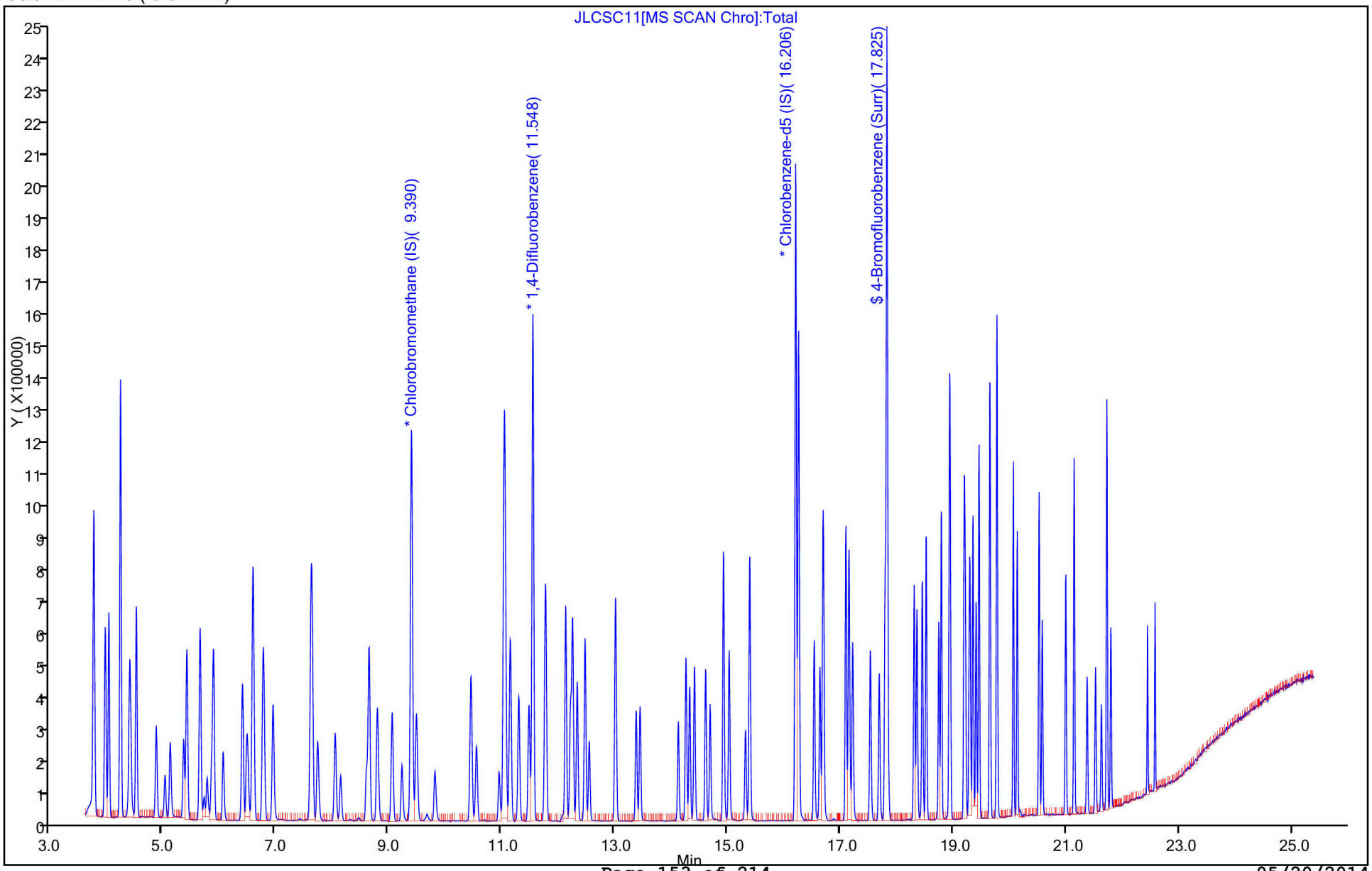
Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
84 1,2,3-Trichloropropane	110	17.691	17.690	0.001	97	74208	1.72	
85 Isopropylbenzene	105	17.793	17.793	0.0	96	532274	1.69	
86 N-Propylbenzene	120	18.310	18.310	0.0	98	140408	1.70	
87 2-Chlorotoluene	126	18.358	18.357	0.001	97	139891	1.62	
88 4-Ethyltoluene	105	18.455	18.454	0.001	98	515426	1.76	
89 1,3,5-Trimethylbenzene	120	18.525	18.524	0.001	92	251020	1.70	
90 Alpha Methyl Styrene	118	18.745	18.745	0.0	85	191429	1.81	
91 n-Decane	57	18.788	18.793	-0.005	89	315493	1.75	
92 tert-Butylbenzene	119	18.934	18.937	-0.003	87	485314	1.69	
93 1,2,4-Trimethylbenzene	105	18.950	18.949	0.001	92	441617	1.73	
94 sec-Butylbenzene	105	19.197	19.196	0.001	98	645034	1.72	
95 1,3-Dichlorobenzene	146	19.219	19.217	0.002	99	253635	1.51	
96 Benzyl chloride	91	19.283	19.288	-0.005	98	314626	1.65	
97 1,4-Dichlorobenzene	146	19.299	19.302	-0.003	93	236806	1.52	
98 4-Isopropyltoluene	119	19.353	19.352	0.001	88	519786	1.73	
99 1,2,3-Trimethylbenzene	105	19.407	19.409	-0.002	98	373764	1.80	
100 Butylcyclohexane	83	19.461	19.460	0.001	93	404088	1.70	
101 2,3-Dihydroindene	117	19.649	19.653	-0.004	89	398305	1.71	
102 1,2-Dichlorobenzene	146	19.654	19.653	0.001	79	250746	1.53	
103 n-Butylbenzene	91	19.773	19.777	-0.004	96	459993	1.65	
104 Indene	116	19.778	19.781	-0.003	86	365312	1.79	
105 Undecane	57	20.069	20.068	0.001	96	316015	1.74	
106 1,2-Dimethyl-4-Ethylbenzene	119	20.139	20.138	0.001	97	470558	1.67	
108 1,2,4,5-Tetramethylbenzene	119	20.526	20.525	0.001	97	505503	1.79	
107 1,2,3,5-Tetramethylbenzene	119	20.580	20.582	-0.002	95	314467	1.70	
109 1,2,3,4-Tetramethylbenzene	119	20.999	20.998	0.001	96	398813	1.74	
110 Dodecane	57	21.145	21.148	-0.003	94	332106	1.77	
111 1,2,4-Trichlorobenzene	180	21.376	21.379	-0.003	94	123214	1.69	
112 Naphthalene	128	21.526	21.527	-0.001	99	349347	1.69	
113 Benzo(b)thiophene	134	21.629	21.631	-0.002	99	235321	1.68	
114 Hexachlorobutadiene	225	21.726	21.729	-0.003	84	215146	1.44	
115 1,2,3-Trichlorobenzene	180	21.801	21.800	0.001	96	156570	1.66	
116 2-Methylnaphthalene	142	22.446	22.449	-0.003	97	183079	8.32	
117 1-Methylnaphthalene	142	22.581	22.583	-0.002	96	194988	8.59	
139 Isopropyl ether	45	8.788	8.794	-0.006	97	419583	NR	
142 Tert-butyl ethyl ether	59	9.482	9.487	-0.005	96	370351	NR	
140 Tert-amyl methyl ether	73	11.478	11.482	-0.004	93	349396	NR	
A 118 C6 Range	1	8.633	8.553 -	8.736	0	1771274	1.86	
A 122 Toluene Range	1	14.266	14.236 -	14.296	0	1044079	1.76	
A 123 C8 Range	1	14.927	14.880 -	14.977	0	1637147	1.78	
S 124 Xylenes, Total	100				0		5.09	

Report Date: 14-Mar-2014 13:55:24 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JLCSC11.D				
Injection Date:	11-Mar-2014 23:33:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	ICV	Lab Sample ID:	ICV 140-949/14-A	Worklist Smp#:	14
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



FORM VII

AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Lab Sample ID: CCVIS 140-1222/2 Calibration Date: 05/15/2014 10:30

Instrument ID: MJ Calib Start Date: 03/11/2014 12:40

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/11/2014 19:57

Lab File ID: JCCVE15.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4128	0.5342		2.59	2.00	29.4	30.0
Propene	Ave	1.227	1.795		2.93	2.00	46.4*	30.0
Dichlorodifluoromethane	Ave	3.962	5.475		2.76	2.00	38.2*	30.0
Chloromethane	Ave	0.4501	0.5950		2.64	2.00	32.2*	30.0
1,2-Dichloro-1,1,2,2-tetrafl uoroethane	Ave	2.990	3.721		2.49	2.00	24.5	30.0
Acetaldehyde	Ave	0.3947	0.4432		11.2	10.0	12.3	50.0
Vinyl chloride	Ave	1.483	1.861		2.51	2.00	25.5	30.0
1,3-Butadiene	Ave	1.030	1.280		2.48	2.00	24.2	30.0
Butane	Ave	2.110	2.713		2.57	2.00	28.5	30.0
Bromomethane	Ave	1.508	1.761		2.34	2.00	16.8	30.0
Chloroethane	Ave	0.6822	0.7780		2.28	2.00	14.0	30.0
Ethanol	Ave	0.3211	0.4595		14.3	10.0	43.1	50.0
Vinyl bromide	Ave	1.283	1.394		2.17	2.00	8.7	30.0
2-Methylbutane	Ave	1.699	2.149		2.53	2.00	26.5	30.0
Acrolein	Ave	0.3266	0.3239		1.98	2.00	-0.8	30.0
Trichlorofluoromethane	Ave	3.481	4.195		2.41	2.00	20.5	30.0
Acetonitrile	Ave	0.3607	0.4806		2.67	2.00	33.3*	30.0
Acetone	Ave	0.5686	0.4243		4.48	6.00	-25.4	30.0
Isopropyl alcohol	Ave	1.501	1.684		6.73	6.00	12.2	30.0
Pentane	Ave	0.2152	0.2411		2.24	2.00	12.0	30.0
Ethyl ether	Ave	1.047	1.493		2.85	2.00	42.7*	30.0
1,1-Dichloroethene	Ave	1.123	1.192		2.12	2.00	6.1	30.0
tert-Butyl alcohol	Ave	1.849	2.036		2.20	2.00	10.1	30.0
Acrylonitrile	Ave	0.5945	0.6748		2.27	2.00	13.5	30.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	2.412	2.760		2.29	2.00	14.4	30.0
Methylene Chloride	Ave	1.070	1.170		2.19	2.00	9.3	30.0
3-Chloropropene	Ave	1.113	1.369		2.46	2.00	23.0	30.0
Carbon disulfide	Ave	3.763	4.292		2.28	2.00	14.0	30.0
trans-1,2-Dichloroethene	Ave	1.353	1.413		2.09	2.00	4.5	30.0
2-Methylpentane	Ave	3.087	4.135		2.68	2.00	34.0	50.0
Methyl tert-butyl ether	Ave	2.042	2.300		2.25	2.00	12.7	30.0
1,1-Dichloroethane	Ave	2.111	2.576		2.44	2.00	22.0	30.0
Vinyl acetate	Ave	1.849	2.305		2.49	2.00	24.7	30.0
2-Butanone (MEK)	Ave	0.3786	0.4018		2.12	2.00	6.1	30.0
Hexane	Ave	1.075	1.259		2.34	2.00	17.1	30.0
cis-1,2-Dichloroethene	Ave	1.155	1.254		2.17	2.00	8.6	30.0
Ethyl acetate	Ave	1.649	2.160		2.62	2.00	31.0*	30.0
Chloroform	Ave	2.331	2.663		2.28	2.00	14.2	30.0
Tetrahydrofuran	Ave	0.9265	1.185		2.56	2.00	27.8	30.0
1,1,1-Trichloroethane	Ave	2.429	2.830		2.33	2.00	16.5	30.0

FORM VII TO 15 LL

FORM VII

AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Lab Sample ID: CCVIS 140-1222/2 Calibration Date: 05/15/2014 10:30

Instrument ID: MJ Calib Start Date: 03/11/2014 12:40

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/11/2014 19:57

Lab File ID: JCCVE15.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloroethane	Ave	0.3103	0.3858		2.49	2.00	24.3	30.0
1-Butanol	Ave	0.0874	0.1201		2.75	2.00	37.3*	30.0
Benzene	Ave	0.6863	0.7257		2.11	2.00	5.7	30.0
Cyclohexane	Ave	0.1354	0.1541		2.28	2.00	13.8	30.0
Carbon tetrachloride	Ave	0.5669	0.5675		2.00	2.00	0.0	30.0
2,3-Dimethylpentane	Ave	0.1619	0.1796		2.22	2.00	10.9	50.0
Thiophene	Ave	0.4238	0.4567		2.16	2.00	7.8	50.0
2,2,4-Trimethylpentane	Ave	1.172	1.353		2.31	2.00	15.4	30.0
Heptane	Ave	0.2427	0.2514		2.07	2.00	3.6	30.0
1,2-Dichloropropane	Ave	0.2320	0.2550		2.20	2.00	9.9	30.0
Trichloroethene	Ave	0.3329	0.3178		1.91	2.00	-4.6	30.0
Dibromomethane	Ave	0.3053	0.3282		2.15	2.00	7.5	30.0
Bromodichloromethane	Ave	0.4844	0.5234		2.16	2.00	8.1	30.0
1,4-Dioxane	Ave	0.0831	0.0883		2.13	2.00	6.3	30.0
Methyl methacrylate	Ave	0.2081	0.2669		2.57	2.00	28.3	30.0
Methylcyclohexane	Ave	0.4620	0.4870		2.11	2.00	5.4	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4193	0.5213		2.49	2.00	24.3	30.0
cis-1,3-Dichloropropene	Ave	0.3291	0.3352		2.04	2.00	1.9	30.0
trans-1,3-Dichloropropene	Ave	0.3315	0.3631		2.19	2.00	9.6	30.0
Toluene	Ave	0.7420	0.7553		2.04	2.00	1.8	30.0
1,1,2-Trichloroethane	Ave	0.2352	0.2570		2.19	2.00	9.3	30.0
2-Methylthiophene	Ave	0.6668	0.6825		2.05	2.00	2.3	50.0
3-Methylthiophene	Ave	0.6690	0.6622		1.98	2.00	-1.0	50.0
2-Hexanone	Ave	0.2430	0.2769		2.28	2.00	13.9	30.0
Octane	Ave	0.2723	0.2684		1.97	2.00	-1.4	30.0
Dibromochloromethane	Ave	0.5191	0.4950		1.91	2.00	-4.6	30.0
1,2-Dibromoethane (EDB)	Ave	0.4030	0.4106		2.04	2.00	1.9	30.0
Tetrachloroethene	Ave	0.3457	0.3098		1.79	2.00	-10.4	30.0
Chlorobenzene	Ave	0.6339	0.5772		1.82	2.00	-8.9	30.0
2,3-Dimethylheptane	Ave	0.8171	1.086		2.66	2.00	32.9	50.0
Ethylbenzene	Ave	0.8196	0.8265		2.02	2.00	0.8	30.0
2-Ethylthiophene	Ave	0.6423	0.6548		2.04	2.00	1.9	50.0
m-Xylene & p-Xylene	Ave	0.6614	0.6586		3.98	4.00	-0.4	30.0
Nonane	Ave	0.5146	0.5859		2.28	2.00	13.9	30.0
Bromoform	Ave	0.4101	0.3611		1.76	2.00	-11.9	30.0
Styrene	Ave	0.4542	0.4407		1.94	2.00	-3.0	30.0
o-Xylene	Ave	0.6705	0.7038		2.10	2.00	5.0	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5478	0.5724		2.09	2.00	4.5	30.0
1,2,3-Trichloropropane	Ave	0.1314	0.1303		1.98	2.00	-0.8	30.0
Isopropylbenzene	Ave	0.9553	0.9498		1.99	2.00	-0.6	30.0
Propylbenzene	Ave	0.2519	0.2321		1.84	2.00	-7.9	30.0

FORM VII TO 15 LL

May 23, 2014

FORM VII

AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Lab Sample ID: CCVIS 140-1222/2 Calibration Date: 05/15/2014 10:30

Instrument ID: MJ Calib Start Date: 03/11/2014 12:40

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/11/2014 19:57

Lab File ID: JCCVE15.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chlorotoluene	Ave	0.2629	0.2377		1.81	2.00	-9.6	30.0
4-Ethyltoluene	Ave	0.8909	0.8732		1.96	2.00	-2.0	30.0
1,3,5-Trimethylbenzene	Ave	0.4479	0.4096		1.83	2.00	-8.5	30.0
Alpha Methyl Styrene	Ave	0.3209	0.3029		1.89	2.00	-5.6	30.0
Decane	Ave	0.5485	0.6340		2.31	2.00	15.6	30.0
tert-Butylbenzene	Ave	0.8748	0.8338		1.91	2.00	-4.7	30.0
1,2,4-Trimethylbenzene	Ave	0.7768	0.7651		1.97	2.00	-1.5	30.0
sec-Butylbenzene	Ave	1.140	1.147		2.01	2.00	0.6	30.0
1,3-Dichlorobenzene	Ave	0.5106	0.4111		1.61	2.00	-19.5	30.0
Benzyl chloride	Ave	0.5802	0.5487		1.89	2.00	-5.4	30.0
1,4-Dichlorobenzene	Ave	0.4752	0.3734		1.57	2.00	-21.4	30.0
4-Isopropyltoluene	Ave	0.9141	0.8777		1.92	2.00	-4.0	30.0
1,2,3-Trimethylbenzene	Ave	0.6330	0.6367		2.01	2.00	0.6	50.0
Butylcyclohexane	Ave	0.7225	0.7536		2.09	2.00	4.3	50.0
1,2-Dichlorobenzene	Ave	0.4994	0.4046		1.62	2.00	-19.0	30.0
Indane	Ave	0.7098	0.6477		1.83	2.00	-8.7	50.0
Butylbenzene	Ave	0.8482	0.8463		2.00	2.00	-0.2	30.0
Indene	Ave	0.6202	0.5754		1.86	2.00	-7.2	50.0
Undecane	Ave	0.5525	0.6268		2.27	2.00	13.4	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.8571	0.7609		1.78	2.00	-11.2	50.0
1,2,4,5-Tetramethylbenzene	Ave	0.8611	0.8089		1.88	2.00	-6.1	50.0
1,2,3,5-Tetramethylbenzene	Ave	0.5621	0.5030		1.79	2.00	-10.5	50.0
1,2,3,4-Tetramethylbenzene	Ave	0.6963	0.6249		1.79	2.00	-10.3	50.0
Dodecane	Ave	0.5721	0.5979		2.09	2.00	4.5	30.0
1,2,4-Trichlorobenzene	Ave	0.2222	0.1558		1.40	2.00	-29.9	30.0
Naphthalene	Ave	0.6294	0.4674		1.49	2.00	-25.7	30.0
Benzo(b)thiophene	Ave	0.4265	0.2742		1.29	2.00	-35.7	50.0
Hexachlorobutadiene	Ave	0.4540	0.3188		1.40	2.00	-29.8	30.0
1,2,3-Trichlorobenzene	Ave	0.2871	0.1950		1.36	2.00	-32.1*	30.0
2-Methylnaphthalene	Ave	0.0669	0.0334		6.24	12.5	-50.1*	50.0
1-Methylnaphthalene	Ave	0.0690	0.0421		7.62	12.5	-39.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7075	0.7959		4.50	4.00	12.5	30.0

May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\KNXCHROM\ChromData\MJ\20140514-681.b\JCCVE15.D
Lims ID: ccvis
Client ID:
Sample Type: CCVIS
Inject. Date: 15-May-2014 10:30:30 ALS Bottle#: 3 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: CCV/LCS,,2,6,,ccvis
Misc. Info.: J051514,TO15,,140-0000681-002
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub3

Method: \\KNXCHROM\ChromData\MJ\20140514-681.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 16-May-2014 07:07:46 Calib Date: 11-Mar-2014 19:57:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: tajh Date: 16-May-2014 07:07:46

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.318	9.318	0.000	94	190618	4.00	4.00	s
* 2 1,4-Difluorobenzene	114	11.475	11.475	0.000	94	884388	4.00	4.00	s
* 3 Chlorobenzene-d5 (IS)	117	16.145	16.145	0.000	90	733477	4.00	4.00	s
$ 5 4-Bromofluorobenzene (Surr	95	17.769	17.769	0.000	84	583788	4.00	4.50	
6 Chlorodifluoromethane	67	3.960	3.960	0.000	94	50911	2.00	2.59	
7 Propene	41	3.971	3.971	0.000	89	171097	2.00	2.93	
8 Dichlorodifluoromethane	85	4.025	4.025	0.000	100	521798	2.00	2.76	
9 Chloromethane	52	4.224	4.224	0.000	58	56712	2.00	2.64	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.229	4.229	0.000	92	354686	2.00	2.49	
11 Acetaldehyde	44	4.385	4.385	0.000	95	211186	10.0	11.2	
12 Vinyl chloride	62	4.407	4.407	0.000	99	177351	2.00	2.51	
14 Butadiene	54	4.503	4.503	0.000	66	121986	2.00	2.48	
13 Butane	43	4.503	4.503	0.000	85	258542	2.00	2.57	
15 Bromomethane	94	4.848	4.848	0.000	97	167824	2.00	2.34	
16 Chloroethane	64	5.004	5.004	0.000	93	74146	2.00	2.28	
17 Ethanol	31	5.095	5.095	0.000	97	218987	10.0	14.3	
18 Vinyl bromide	106	5.326	5.326	0.000	96	132884	2.00	2.17	
19 2-Methylbutane	43	5.386	5.386	0.000	94	204846	2.00	2.53	
20 Trichlorofluoromethane	101	5.617	5.617	0.000	97	399856	2.00	2.41	
21 Acrolein	56	5.617	5.617	0.000	6	30873	2.00	1.98	
22 Acetonitrile	40	5.682	5.682	0.000	94	45806	2.00	2.67	
23 Acetone	58	5.730	5.730	0.000	57	121338	6.00	4.48	
24 Isopropyl alcohol	45	5.811	5.811	0.000	97	481553	6.00	6.73	
25 Pentane	72	5.848	5.848	0.000	97	22979	2.00	2.24	
26 Ethyl ether	31	6.015	6.015	0.000	86	142324	2.00	2.85	
27 1,1-Dichloroethene	96	6.354	6.354	0.000	90	113564	2.00	2.12	
28 2-Methyl-2-propanol	59	6.429	6.429	0.000	89	194073	2.00	2.20	
29 Acrylonitrile	53	6.445	6.445	0.000	50	64313	2.00	2.27	
30 1,1,2-Trichloro-1,2,2-trif	101	6.542	6.542	0.000	91	263079	2.00	2.29	
31 Methylene Chloride	84	6.709	6.709	0.000	93	111468	2.00	2.19	

May 23, 2014

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.725	6.725	0.000	91	130486	2.00	2.46	
33 Carbon disulfide	76	6.887	6.887	0.000	99	409021	2.00	2.28	
34 trans-1,2-Dichloroethene	96	7.548	7.548	0.000	94	134718	2.00	2.09	
35 2-Methylpentane	43	7.575	7.575	0.000	96	394131	2.00	2.68	
36 Methyl tert-butyl ether	73	7.672	7.672	0.000	94	219251	2.00	2.25	
37 1,1-Dichloroethane	63	7.979	7.979	0.000	99	245512	2.00	2.44	
38 Vinyl acetate	43	8.075	8.075	0.000	100	219715	2.00	2.49	
39 2-Butanone (MEK)	72	8.527	8.527	0.000	72	38291	2.00	2.12	
40 Hexane	56	8.581	8.581	0.000	86	120028	2.00	2.34	
139 Isopropyl ether	45	8.726	8.726	0.000	96	344509	2.00	2.57	
41 cis-1,2-Dichloroethene	96	8.979	8.979	0.000	97	119493	2.00	2.17	
42 Ethyl acetate	43	9.151	9.151	0.000	95	205834	2.00	2.62	
43 Chloroform	83	9.329	9.329	0.000	63	253788	2.00	2.28	
142 Tert-butyl ethyl ether	59	9.415	9.415	0.000	98	281228	2.00	2.31	
44 Tetrahydrofuran	42	9.738	9.738	0.000	92	112894	2.00	2.56	
45 1,1,1-Trichloroethane	97	10.372	10.372	0.000	88	269738	2.00	2.33	
46 1,2-Dichloroethane	62	10.469	10.469	0.000	97	170586	2.00	2.49	
47 n-Butanol	31	10.873	10.873	0.000	14	53103	2.00	2.75	
48 Benzene	78	10.953	10.953	0.000	97	320885	2.00	2.11	
49 Cyclohexane	69	10.964	10.964	0.000	84	68133	2.00	2.28	
50 Carbon tetrachloride	117	10.980	10.980	0.000	91	250929	2.00	2.00	
51 2,3-Dimethylpentane	71	11.077	11.077	0.000	91	79414	2.00	2.22	
52 Thiophene	84	11.222	11.222	0.000	96	201948	2.00	2.16	
140 Tert-amyl methyl ether	73	11.405	11.405	0.000	80	247681	2.00	2.17	
53 Isooctane	57	11.701	11.701	0.000	96	598149	2.00	2.31	
54 n-Heptane	71	12.062	12.062	0.000	96	111161	2.00	2.07	
55 1,2-Dichloropropane	63	12.137	12.137	0.000	87	112771	2.00	2.20	
56 Trichloroethene	130	12.180	12.180	0.000	91	140506	2.00	1.91	
57 Dibromomethane	93	12.255	12.255	0.000	77	145106	2.00	2.15	
59 Dichlorobromomethane	83	12.395	12.395	0.000	96	231462	2.00	2.16	
58 1,4-Dioxane	88	12.406	12.406	0.000	32	39064	2.00	2.13	
60 Methyl methacrylate	41	12.476	12.476	0.000	85	118038	2.00	2.57	
61 Methylcyclohexane	83	12.944	12.944	0.000	91	215338	2.00	2.11	
62 4-Methyl-2-pentanone (MIBK	43	13.310	13.310	0.000	99	230522	2.00	2.49	
63 cis-1,3-Dichloropropene	75	13.374	13.374	0.000	96	148243	2.00	2.04	
64 trans-1,3-Dichloropropene	75	14.057	14.057	0.000	95	133169	2.00	2.19	
65 Toluene	91	14.192	14.192	0.000	90	277003	2.00	2.04	
66 1,1,2-Trichloroethane	83	14.256	14.256	0.000	75	94257	2.00	2.19	
67 2-Methylthiophene	97	14.342	14.342	0.000	99	250292	2.00	2.05	
68 3-Methylthiophene	97	14.541	14.541	0.000	99	242850	2.00	1.98	
69 2-Hexanone	58	14.628	14.628	0.000	90	101555	2.00	2.28	
70 n-Octane	85	14.870	14.870	0.000	97	98414	2.00	1.97	
71 Chlorodibromomethane	129	14.961	14.961	0.000	94	181522	2.00	1.91	
72 Ethylene Dibromide	107	15.246	15.246	0.000	97	150583	2.00	2.04	
73 Tetrachloroethene	129	15.327	15.327	0.000	86	113609	2.00	1.79	
75 Chlorobenzene	112	16.193	16.193	0.000	76	211689	2.00	1.82	
74 2,3-Dimethylheptane	43	16.204	16.204	0.000	92	398334	2.00	2.66	
76 Ethylbenzene	91	16.473	16.473	0.000	98	303106	2.00	2.02	
77 2-Ethylthiophene	97	16.575	16.575	0.000	98	240121	2.00	2.04	
78 m-Xylene & p-Xylene	91	16.634	16.634	0.000	98	483053	4.00	3.98	
79 n-Nonane	57	17.043	17.043	0.000	94	214881	2.00	2.28	
81 Bromoform	173	17.086	17.086	0.000	80	132444	2.00	1.76	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
80 Styrene	104	17.097	17.097	0.000	90	161627	2.00	1.94	
82 o-Xylene	91	17.156	17.156	0.000	78	258105	2.00	2.10	
83 1,1,2,2-Tetrachloroethane	83	17.468	17.468	0.000	98	209933	2.00	2.09	
84 1,2,3-Trichloropropane	110	17.629	17.629	0.000	95	47797	2.00	1.98	
85 Isopropylbenzene	105	17.737	17.737	0.000	98	348315	2.00	1.99	
86 N-Propylbenzene	120	18.259	18.259	0.000	95	85119	2.00	1.84	
87 2-Chlorotoluene	126	18.307	18.307	0.000	49	87189	2.00	1.81	
88 4-Ethyltoluene	105	18.399	18.399	0.000	97	320228	2.00	1.96	
89 1,3,5-Trimethylbenzene	120	18.468	18.468	0.000	91	150226	2.00	1.83	
90 Alpha Methyl Styrene	118	18.694	18.694	0.000	81	111088	2.00	1.89	
91 n-Decane	57	18.748	18.748	0.000	85	232524	2.00	2.31	
92 tert-Butylbenzene	119	18.888	18.888	0.000	81	305784	2.00	1.91	
93 1,2,4-Trimethylbenzene	105	18.899	18.899	0.000	89	280602	2.00	1.97	
94 sec-Butylbenzene	105	19.146	19.146	0.000	97	420664	2.00	2.01	
95 1,3-Dichlorobenzene	146	19.168	19.168	0.000	98	150775	2.00	1.61	
96 Benzyl chloride	91	19.238	19.238	0.000	97	201225	2.00	1.89	
97 1,4-Dichlorobenzene	146	19.254	19.254	0.000	92	136937	2.00	1.57	
98 4-Isopropyltoluene	119	19.308	19.308	0.000	77	321889	2.00	1.92	
99 1,2,3-Trimethylbenzene	105	19.361	19.361	0.000	67	233493	2.00	2.01	
100 Butylcyclohexane	83	19.415	19.415	0.000	88	276374	2.00	2.09	
101 2,3-Dihydroindene	117	19.604	19.604	0.000	88	237529	2.00	1.83	
102 1,2-Dichlorobenzene	146	19.604	19.604	0.000	76	148393	2.00	1.62	
103 n-Butylbenzene	91	19.733	19.733	0.000	95	310354	2.00	2.00	
104 Indene	116	19.733	19.733	0.000	78	211029	2.00	1.86	
105 Undecane	57	20.029	20.029	0.000	91	229882	2.00	2.27	
106 1,2-Dimethyl-4-Ethylbenzen	119	20.093	20.093	0.000	96	279046	2.00	1.78	
108 1,2,4,5-Tetramethylbenzene	119	20.480	20.480	0.000	96	296640	2.00	1.88	
107 1,2,3,5-Tetramethylbenzene	119	20.534	20.534	0.000	93	184458	2.00	1.79	
109 1,2,3,4-Tetramethylbenzene	119	20.948	20.948	0.000	95	229176	2.00	1.79	
110 Dodecane	57	21.104	21.104	0.000	90	219269	2.00	2.09	
111 1,2,4-Trichlorobenzene	180	21.325	21.325	0.000	88	57149	2.00	1.40	
112 Naphthalene	128	21.476	21.476	0.000	98	171420	2.00	1.49	
113 Benzo(b)thiophene	134	21.583	21.583	0.000	97	100575	2.00	1.29	
114 Hexachlorobutadiene	225	21.685	21.685	0.000	80	116906	2.00	1.40	
115 1,2,3-Trichlorobenzene	180	21.755	21.755	0.000	93	71520	2.00	1.36	
116 2-Methylnaphthalene	142	22.412	22.412	0.000	98	76608	12.5	6.24	
117 1-Methylnaphthalene	142	22.546	22.546	0.000	99	96445	12.5	7.62	
141 1,2-Dibromo-3-Chloropropan	157	20.195	20.195	0.000	84	34457	NR	NR	
A 118 C6 Range	1	8.576	(8.516-8.635)		0	1484471	2.00	2.67	
A 122 Toluene Range	1	14.192	(14.162-14.222)		0	698686	2.00	2.11	
A 123 C8 Range	1	14.870	(14.821-14.918)		0	1148566	2.00	2.24	
S 124 Xylenes, Total	100				0		6.00	6.08	

QC Flag Legend

Processing Flags
s - Failed ISTD Recovery Test

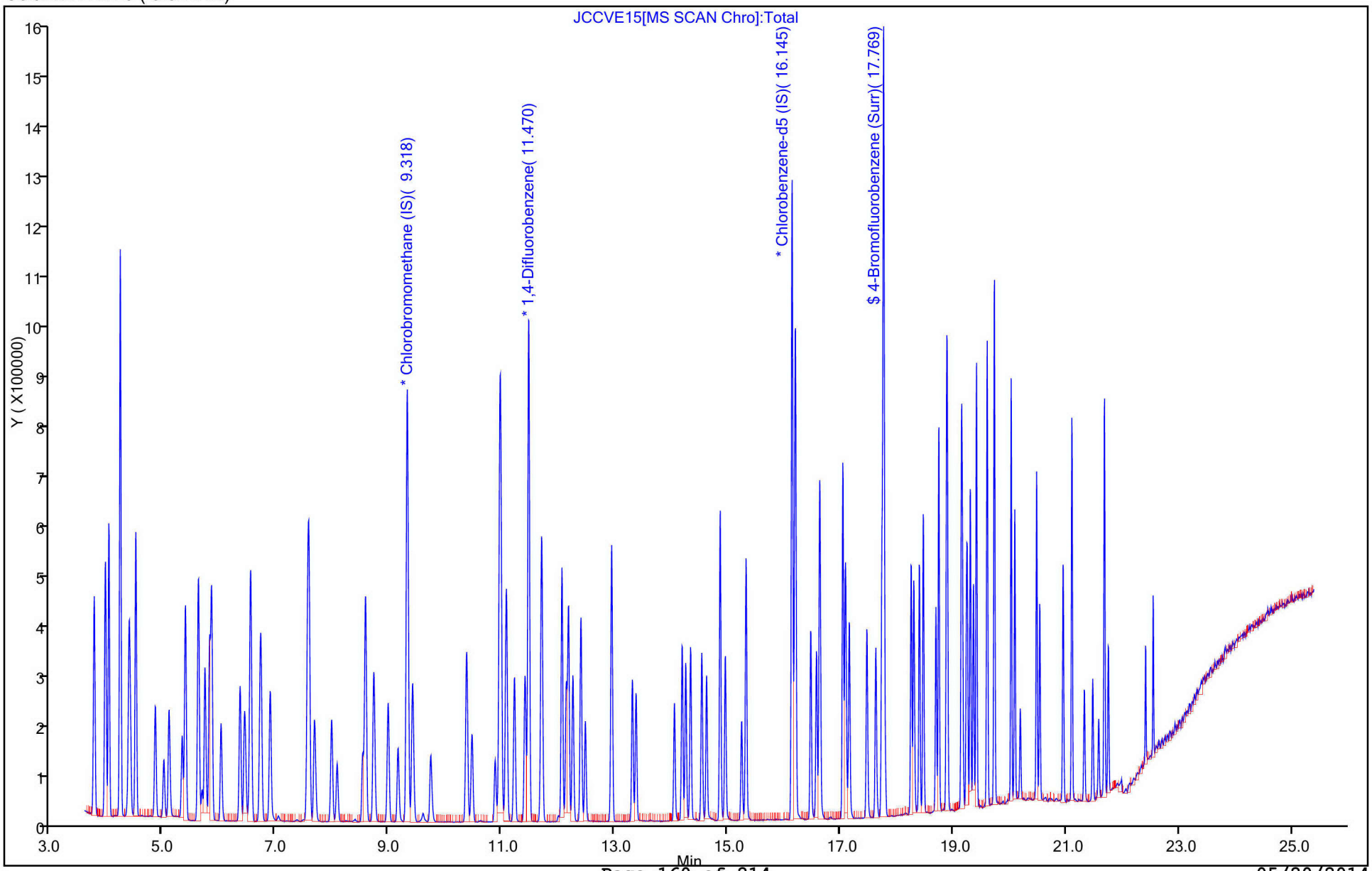
Report Date: 16-May-2014 07:07:48 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JCCVE15.D				
Injection Date:	15-May-2014 10:30:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	ccvis			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII

AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Lab Sample ID: CCVIS 140-1228/2 Calibration Date: 05/16/2014 07:18

Instrument ID: MJ Calib Start Date: 03/11/2014 12:40

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/11/2014 19:57

Lab File ID: JCCVE16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4128	0.5260		2.55	2.00	27.4	30.0
Propene	Ave	1.227	1.727		2.82	2.00	40.8*	30.0
Dichlorodifluoromethane	Ave	3.962	5.331		2.69	2.00	34.5*	30.0
Chloromethane	Ave	0.4501	0.5647		2.51	2.00	25.5	30.0
1,2-Dichloro-1,1,2,2-tetrafl uoroethane	Ave	2.990	3.739		2.50	2.00	25.0	30.0
Acetaldehyde	Ave	0.3947	0.4113		10.4	10.0	4.2	50.0
Vinyl chloride	Ave	1.483	1.818		2.45	2.00	22.6	30.0
1,3-Butadiene	Ave	1.030	1.259		2.44	2.00	22.2	30.0
Butane	Ave	2.110	2.671		2.53	2.00	26.6	30.0
Bromomethane	Ave	1.508	1.711		2.27	2.00	13.4	30.0
Chloroethane	Ave	0.6822	0.7454		2.19	2.00	9.3	30.0
Ethanol	Ave	0.3211	0.4568		14.2	10.0	42.2	50.0
Vinyl bromide	Ave	1.283	1.372		2.14	2.00	7.0	30.0
2-Methylbutane	Ave	1.699	2.078		2.45	2.00	22.3	30.0
Acrolein	Ave	0.3266	0.3296		2.02	2.00	0.9	30.0
Trichlorofluoromethane	Ave	3.481	4.073		2.34	2.00	17.0	30.0
Acetonitrile	Ave	0.3607	0.4625		2.56	2.00	28.2	30.0
Acetone	Ave	0.5686	0.4349		4.59	6.00	-23.5	30.0
Isopropyl alcohol	Ave	1.501	1.711		6.84	6.00	13.9	30.0
Pentane	Ave	0.2152	0.2370		2.20	2.00	10.1	30.0
Ethyl ether	Ave	1.047	1.417		2.71	2.00	35.4*	30.0
1,1-Dichloroethene	Ave	1.123	1.156		2.06	2.00	3.0	30.0
tert-Butyl alcohol	Ave	1.849	2.051		2.22	2.00	10.9	30.0
Acrylonitrile	Ave	0.5945	0.6736		2.27	2.00	13.3	30.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	2.412	2.617		2.17	2.00	8.5	30.0
Methylene Chloride	Ave	1.070	1.104		2.06	2.00	3.1	30.0
3-Chloropropene	Ave	1.113	1.279		2.30	2.00	14.9	30.0
Carbon disulfide	Ave	3.763	4.201		2.23	2.00	11.6	30.0
trans-1,2-Dichloroethene	Ave	1.353	1.379		2.04	2.00	1.9	30.0
2-Methylpentane	Ave	3.087	3.857		2.50	2.00	25.0	50.0
Methyl tert-butyl ether	Ave	2.042	2.294		2.25	2.00	12.4	30.0
1,1-Dichloroethane	Ave	2.111	2.321		2.20	2.00	10.0	30.0
Vinyl acetate	Ave	1.849	2.301		2.49	2.00	24.4	30.0
2-Butanone (MEK)	Ave	0.3786	0.4222		2.23	2.00	11.5	30.0
Hexane	Ave	1.075	1.161		2.16	2.00	8.0	30.0
cis-1,2-Dichloroethene	Ave	1.155	1.151		1.99	2.00	-0.3	30.0
Ethyl acetate	Ave	1.649	2.266		2.75	2.00	37.4*	30.0
Chloroform	Ave	2.331	2.454		2.11	2.00	5.3	30.0
Tetrahydrofuran	Ave	0.9265	1.214		2.62	2.00	31.0*	30.0
1,1,1-Trichloroethane	Ave	2.429	2.563		2.11	2.00	5.5	30.0

FORM VII TO 15 LL

FORM VII

AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Lab Sample ID: CCVIS 140-1228/2 Calibration Date: 05/16/2014 07:18

Instrument ID: MJ Calib Start Date: 03/11/2014 12:40

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/11/2014 19:57

Lab File ID: JCCVE16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloroethane	Ave	0.3103	0.3753		2.42	2.00	20.9	30.0
1-Butanol	Ave	0.0874	0.1291		2.95	2.00	47.7*	30.0
Benzene	Ave	0.6863	0.7267		2.12	2.00	5.9	30.0
Cyclohexane	Ave	0.1354	0.1556		2.30	2.00	14.9	30.0
Carbon tetrachloride	Ave	0.5669	0.5565		1.96	2.00	-1.8	30.0
2,3-Dimethylpentane	Ave	0.1619	0.1743		2.15	2.00	7.6	50.0
Thiophene	Ave	0.4238	0.4510		2.13	2.00	6.4	50.0
2,2,4-Trimethylpentane	Ave	1.172	1.339		2.28	2.00	14.2	30.0
Heptane	Ave	0.2427	0.2583		2.13	2.00	6.4	30.0
1,2-Dichloropropane	Ave	0.2320	0.2544		2.19	2.00	9.7	30.0
Trichloroethene	Ave	0.3329	0.3088		1.86	2.00	-7.2	30.0
Dibromomethane	Ave	0.3053	0.3294		2.16	2.00	7.9	30.0
Bromodichloromethane	Ave	0.4844	0.5411		2.23	2.00	11.7	30.0
1,4-Dioxane	Ave	0.0831	0.0967		2.33	2.00	16.4	30.0
Methyl methacrylate	Ave	0.2081	0.3146		3.02	2.00	51.2*	30.0
Methylcyclohexane	Ave	0.4620	0.4749		2.06	2.00	2.8	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4193	0.5655		2.70	2.00	34.9*	30.0
cis-1,3-Dichloropropene	Ave	0.3291	0.3459		2.10	2.00	5.1	30.0
trans-1,3-Dichloropropene	Ave	0.3315	0.3830		2.31	2.00	15.6	30.0
Toluene	Ave	0.7420	0.7911		2.13	2.00	6.6	30.0
1,1,2-Trichloroethane	Ave	0.2352	0.2674		2.27	2.00	13.7	30.0
2-Methylthiophene	Ave	0.6668	0.7070		2.12	2.00	6.0	50.0
3-Methylthiophene	Ave	0.6690	0.6965		2.08	2.00	4.1	50.0
2-Hexanone	Ave	0.2430	0.3063		2.52	2.00	26.0	30.0
Octane	Ave	0.2723	0.2927		2.15	2.00	7.5	30.0
Dibromochloromethane	Ave	0.5191	0.5348		2.06	2.00	3.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.4030	0.4344		2.16	2.00	7.8	30.0
Tetrachloroethene	Ave	0.3457	0.3356		1.94	2.00	-2.9	30.0
Chlorobenzene	Ave	0.6339	0.6148		1.94	2.00	-3.0	30.0
2,3-Dimethylheptane	Ave	0.8171	1.134		2.78	2.00	38.8	50.0
Ethylbenzene	Ave	0.8196	0.9197		2.24	2.00	12.2	30.0
2-Ethylthiophene	Ave	0.6423	0.7170		2.23	2.00	11.6	50.0
m-Xylene & p-Xylene	Ave	0.6614	0.7311		4.42	4.00	10.5	30.0
Nonane	Ave	0.5146	0.6051		2.35	2.00	17.6	30.0
Bromoform	Ave	0.4101	0.4012		1.96	2.00	-2.2	30.0
Styrene	Ave	0.4542	0.4898		2.16	2.00	7.8	30.0
o-Xylene	Ave	0.6705	0.7672		2.29	2.00	14.4	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5478	0.6510		2.38	2.00	18.8	30.0
1,2,3-Trichloropropane	Ave	0.1314	0.1508		2.30	2.00	14.8	30.0
Isopropylbenzene	Ave	0.9553	1.037		2.17	2.00	8.6	30.0
Propylbenzene	Ave	0.2519	0.2698		2.14	2.00	7.1	30.0

FORM VII TO 15 LL

May 23, 2014

FORM VII

AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Lab Sample ID: CCVIS 140-1228/2 Calibration Date: 05/16/2014 07:18

Instrument ID: MJ Calib Start Date: 03/11/2014 12:40

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/11/2014 19:57

Lab File ID: JCCVE16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chlorotoluene	Ave	0.2629	0.2639		2.01	2.00	0.4	30.0
4-Ethyltoluene	Ave	0.8909	1.003		2.25	2.00	12.6	30.0
1,3,5-Trimethylbenzene	Ave	0.4479	0.4664		2.08	2.00	4.1	30.0
Alpha Methyl Styrene	Ave	0.3209	0.3558		2.22	2.00	10.9	30.0
Decane	Ave	0.5485	0.6723		2.45	2.00	22.6	30.0
tert-Butylbenzene	Ave	0.8748	0.9239		2.11	2.00	5.6	30.0
1,2,4-Trimethylbenzene	Ave	0.7768	0.8690		2.24	2.00	11.9	30.0
sec-Butylbenzene	Ave	1.140	1.285		2.25	2.00	12.7	30.0
1,3-Dichlorobenzene	Ave	0.5106	0.4728		1.85	2.00	-7.4	30.0
Benzyl chloride	Ave	0.5802	0.6470		2.23	2.00	11.5	30.0
1,4-Dichlorobenzene	Ave	0.4752	0.4359		1.83	2.00	-8.3	30.0
4-Isopropyltoluene	Ave	0.9141	0.9914		2.17	2.00	8.5	30.0
1,2,3-Trimethylbenzene	Ave	0.6330	0.7259		2.29	2.00	14.7	50.0
Butylcyclohexane	Ave	0.7225	0.7783		2.15	2.00	7.7	50.0
1,2-Dichlorobenzene	Ave	0.4994	0.4711		1.89	2.00	-5.7	30.0
Indane	Ave	0.7098	0.7453		2.10	2.00	5.0	50.0
Butylbenzene	Ave	0.8482	0.9499		2.24	2.00	12.0	30.0
Indene	Ave	0.6202	0.6790		2.19	2.00	9.5	50.0
Undecane	Ave	0.5525	0.7112		2.57	2.00	28.7	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.8571	0.8680		2.03	2.00	1.3	50.0
1,2,4,5-Tetramethylbenzene	Ave	0.8611	0.9158		2.13	2.00	6.4	50.0
1,2,3,5-Tetramethylbenzene	Ave	0.5621	0.5727		2.04	2.00	1.9	50.0
1,2,3,4-Tetramethylbenzene	Ave	0.6963	0.7180		2.06	2.00	3.1	50.0
Dodecane	Ave	0.5721	0.6962		2.43	2.00	21.7	30.0
1,2,4-Trichlorobenzene	Ave	0.2222	0.1933		1.74	2.00	-13.0	30.0
Naphthalene	Ave	0.6294	0.5777		1.84	2.00	-8.2	30.0
Benzo(b)thiophene	Ave	0.4265	0.3488		1.64	2.00	-18.2	50.0
Hexachlorobutadiene	Ave	0.4540	0.3685		1.62	2.00	-18.8	30.0
1,2,3-Trichlorobenzene	Ave	0.2871	0.2401		1.67	2.00	-16.4	30.0
2-Methylnaphthalene	Ave	0.0669	0.0503		9.39	12.5	-24.9	50.0
1-Methylnaphthalene	Ave	0.0690	0.0614		11.1	12.5	-11.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7075	0.7956		4.50	4.00	12.5	30.0

May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\KNXCHROM\ChromData\MJ\20140515-684.b\JCCVE16.D
Lims ID: ccvis
Client ID:
Sample Type: CCVIS
Inject. Date: 16-May-2014 07:18:30 ALS Bottle#: 3 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: CCV/LCS,,2,6,,ccvis
Misc. Info.: J051614,TO15,,140-0000684-002
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub3

Method: \\KNXCHROM\ChromData\MJ\20140515-684.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-May-2014 11:19:48 Calib Date: 11-Mar-2014 19:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK002

First Level Reviewer: tajh Date: 19-May-2014 11:19:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.312	9.312	0.000	96	202717	4.00	4.00	s
* 2 1,4-Difluorobenzene	114	11.469	11.469	0.000	94	877830	4.00	4.00	s
* 3 Chlorobenzene-d5 (IS)	117	16.143	16.143	0.000	90	713396	4.00	4.00	s
$ 5 4-Bromofluorobenzene (Surr	95	17.763	17.763	0.000	85	567576	4.00	4.50	
6 Chlorodifluoromethane	67	3.959	3.959	0.000	97	53316	2.00	2.55	
7 Propene	41	3.970	3.970	0.000	99	175017	2.00	2.82	
8 Dichlorodifluoromethane	85	4.029	4.029	0.000	100	540322	2.00	2.69	
9 Chloromethane	52	4.223	4.223	0.000	98	57233	2.00	2.51	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.228	4.228	0.000	94	378963	2.00	2.50	
11 Acetaldehyde	44	4.384	4.384	0.000	96	208441	10.0	10.4	
12 Vinyl chloride	62	4.411	4.411	0.000	99	184272	2.00	2.45	
14 Butadiene	54	4.502	4.502	0.000	67	127598	2.00	2.44	
13 Butane	43	4.508	4.508	0.000	86	270721	2.00	2.53	
15 Bromomethane	94	4.847	4.847	0.000	98	173427	2.00	2.27	
16 Chloroethane	64	5.003	5.003	0.000	92	75554	2.00	2.19	
17 Ethanol	31	5.094	5.094	0.000	98	231496	10.0	14.2	
18 Vinyl bromide	106	5.325	5.325	0.000	96	139060	2.00	2.14	
19 2-Methylbutane	43	5.385	5.385	0.000	94	210665	2.00	2.45	
20 Trichlorofluoromethane	101	5.616	5.616	0.000	98	412863	2.00	2.34	
21 Acrolein	56	5.616	5.616	0.000	24	33410	2.00	2.02	
22 Acetonitrile	40	5.675	5.675	0.000	99	46875	2.00	2.56	
23 Acetone	58	5.729	5.729	0.000	92	132253	6.00	4.59	
24 Isopropyl alcohol	45	5.809	5.809	0.000	87	520221	6.00	6.84	
25 Pentane	72	5.847	5.847	0.000	97	24025	2.00	2.20	
26 Ethyl ether	31	6.014	6.014	0.000	86	143638	2.00	2.71	
27 1,1-Dichloroethene	96	6.353	6.353	0.000	95	117197	2.00	2.06	
28 2-Methyl-2-propanol	59	6.428	6.428	0.000	95	207902	2.00	2.22	
29 Acrylonitrile	53	6.444	6.444	0.000	94	68278	2.00	2.27	
30 1,1,2-Trichloro-1,2,2-trif	101	6.541	6.541	0.000	92	265297	2.00	2.17	
31 Methylene Chloride	84	6.708	6.708	0.000	94	111859	2.00	2.06	

May 23, 2014

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.729	6.729	0.000	92	129604	2.00	2.30	
33 Carbon disulfide	76	6.885	6.885	0.000	99	425816	2.00	2.23	
34 trans-1,2-Dichloroethene	96	7.547	7.547	0.000	95	139756	2.00	2.04	
35 2-Methylpentane	43	7.574	7.574	0.000	96	390971	2.00	2.50	
36 Methyl tert-butyl ether	73	7.676	7.676	0.000	98	232505	2.00	2.25	
37 1,1-Dichloroethane	63	7.977	7.977	0.000	99	235250	2.00	2.20	
38 Vinyl acetate	43	8.074	8.074	0.000	100	233226	2.00	2.49	
39 2-Butanone (MEK)	72	8.526	8.526	0.000	96	42794	2.00	2.23	
40 Hexane	56	8.575	8.575	0.000	85	117695	2.00	2.16	
139 Isopropyl ether	45	8.725	8.725	0.000	96	361995	2.00	2.54	
41 cis-1,2-Dichloroethene	96	8.978	8.978	0.000	98	116635	2.00	1.99	
42 Ethyl acetate	43	9.150	9.150	0.000	96	229688	2.00	2.75	
43 Chloroform	83	9.328	9.328	0.000	96	248695	2.00	2.11	
142 Tert-butyl ethyl ether	59	9.414	9.414	0.000	98	298743	2.00	2.31	
44 Tetrahydrofuran	42	9.731	9.731	0.000	92	123060	2.00	2.62	
45 1,1,1-Trichloroethane	97	10.371	10.371	0.000	96	259780	2.00	2.11	
46 1,2-Dichloroethane	62	10.463	10.463	0.000	95	164701	2.00	2.42	
47 n-Butanol	31	10.877	10.877	0.000	95	56667	2.00	2.95	
48 Benzene	78	10.952	10.952	0.000	97	318972	2.00	2.12	
49 Cyclohexane	69	10.963	10.963	0.000	92	68281	2.00	2.30	
50 Carbon tetrachloride	117	10.979	10.979	0.000	91	244256	2.00	1.96	
51 2,3-Dimethylpentane	71	11.076	11.076	0.000	91	76498	2.00	2.15	
52 Thiophene	84	11.216	11.216	0.000	96	197959	2.00	2.13	
140 Tert-amyl methyl ether	73	11.404	11.404	0.000	89	267252	2.00	2.41	
53 Isooctane	57	11.700	11.700	0.000	96	587612	2.00	2.28	
54 n-Heptane	71	12.060	12.060	0.000	96	113389	2.00	2.13	
55 1,2-Dichloropropane	63	12.136	12.136	0.000	87	111660	2.00	2.19	
56 Trichloroethene	130	12.173	12.173	0.000	90	135545	2.00	1.86	
57 Dibromomethane	93	12.254	12.254	0.000	86	144585	2.00	2.16	
59 Dichlorobromomethane	83	12.394	12.394	0.000	97	237494	2.00	2.23	
58 1,4-Dioxane	88	12.399	12.399	0.000	95	42456	2.00	2.33	
60 Methyl methacrylate	41	12.475	12.475	0.000	93	138091	2.00	3.02	
61 Methylcyclohexane	83	12.943	12.943	0.000	91	208438	2.00	2.06	
62 4-Methyl-2-pentanone (MIBK	43	13.308	13.308	0.000	99	248206	2.00	2.70	
63 cis-1,3-Dichloropropene	75	13.373	13.373	0.000	98	151811	2.00	2.10	
64 trans-1,3-Dichloropropene	75	14.056	14.056	0.000	95	136630	2.00	2.31	
65 Toluene	91	14.191	14.191	0.000	91	282181	2.00	2.13	
66 1,1,2-Trichloroethane	83	14.255	14.255	0.000	96	95381	2.00	2.27	
67 2-Methylthiophene	97	14.341	14.341	0.000	99	252200	2.00	2.12	
68 3-Methylthiophene	97	14.540	14.540	0.000	99	248444	2.00	2.08	
69 2-Hexanone	58	14.626	14.626	0.000	90	109240	2.00	2.52	
70 n-Octane	85	14.869	14.869	0.000	97	104405	2.00	2.15	
71 Chlorodibromomethane	129	14.955	14.955	0.000	94	190771	2.00	2.06	
72 Ethylene Dibromide	107	15.245	15.245	0.000	97	154944	2.00	2.16	
73 Tetrachloroethene	129	15.326	15.326	0.000	87	119702	2.00	1.94	
75 Chlorobenzene	112	16.192	16.192	0.000	77	219303	2.00	1.94	
74 2,3-Dimethylheptane	43	16.203	16.203	0.000	93	404559	2.00	2.78	
76 Ethylbenzene	91	16.472	16.472	0.000	99	328053	2.00	2.24	
77 2-Ethylthiophene	97	16.574	16.574	0.000	98	255756	2.00	2.23	
78 m-Xylene & p-Xylene	91	16.633	16.633	0.000	98	521592	4.00	4.42	
79 n-Nonane	57	17.042	17.042	0.000	94	215837	2.00	2.35	
81 Bromoform	173	17.079	17.079	0.000	92	143103	2.00	1.96	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
80 Styrene	104	17.096	17.096	0.000	96	174724	2.00	2.16	
82 o-Xylene	91	17.155	17.155	0.000	95	273665	2.00	2.29	
83 1,1,2,2-Tetrachloroethane	83	17.467	17.467	0.000	98	232192	2.00	2.38	
84 1,2,3-Trichloropropane	110	17.628	17.628	0.000	95	53800	2.00	2.30	
85 Isopropylbenzene	105	17.736	17.736	0.000	98	370063	2.00	2.17	
86 N-Propylbenzene	120	18.252	18.252	0.000	97	96235	2.00	2.14	
87 2-Chlorotoluene	126	18.301	18.301	0.000	98	94146	2.00	2.01	
88 4-Ethyltoluene	105	18.397	18.397	0.000	97	357795	2.00	2.25	
89 1,3,5-Trimethylbenzene	120	18.467	18.467	0.000	91	166345	2.00	2.08	
90 Alpha Methyl Styrene	118	18.693	18.693	0.000	81	126911	2.00	2.22	
91 n-Decane	57	18.742	18.742	0.000	86	239810	2.00	2.45	
92 tert-Butylbenzene	119	18.882	18.882	0.000	84	329541	2.00	2.11	
93 1,2,4-Trimethylbenzene	105	18.898	18.898	0.000	91	309982	2.00	2.24	
94 sec-Butylbenzene	105	19.145	19.145	0.000	97	458525	2.00	2.25	
95 1,3-Dichlorobenzene	146	19.161	19.161	0.000	97	168630	2.00	1.85	
96 Benzyl chloride	91	19.231	19.231	0.000	96	230769	2.00	2.23	
97 1,4-Dichlorobenzene	146	19.247	19.247	0.000	89	155497	2.00	1.83	
98 4-Isopropyltoluene	119	19.301	19.301	0.000	86	353619	2.00	2.17	
99 1,2,3-Trimethylbenzene	105	19.360	19.360	0.000	98	258941	2.00	2.29	
100 Butylcyclohexane	83	19.414	19.414	0.000	89	277614	2.00	2.15	
101 2,3-Dihydroindene	117	19.602	19.602	0.000	89	265840	2.00	2.10	
102 1,2-Dichlorobenzene	146	19.602	19.602	0.000	77	168049	2.00	1.89	
103 n-Butylbenzene	91	19.726	19.726	0.000	95	338822	2.00	2.24	
104 Indene	116	19.732	19.732	0.000	80	242203	2.00	2.19	
105 Undecane	57	20.027	20.027	0.000	92	253698	2.00	2.57	
106 1,2-Dimethyl-4-Ethylbenzen	119	20.092	20.092	0.000	97	309604	2.00	2.03	
108 1,2,4,5-Tetramethylbenzene	119	20.479	20.479	0.000	95	326672	2.00	2.13	
107 1,2,3,5-Tetramethylbenzene	119	20.533	20.533	0.000	94	204265	2.00	2.04	
109 1,2,3,4-Tetramethylbenzene	119	20.947	20.947	0.000	96	256105	2.00	2.06	
110 Dodecane	57	21.103	21.103	0.000	90	248325	2.00	2.43	
111 1,2,4-Trichlorobenzene	180	21.324	21.324	0.000	92	68954	2.00	1.74	
112 Naphthalene	128	21.474	21.474	0.000	98	206050	2.00	1.84	
113 Benzo(b)thiophene	134	21.582	21.582	0.000	98	124423	2.00	1.64	
114 Hexachlorobutadiene	225	21.684	21.684	0.000	81	131439	2.00	1.62	
115 1,2,3-Trichlorobenzene	180	21.749	21.749	0.000	94	85653	2.00	1.67	
116 2-Methylnaphthalene	142	22.411	22.411	0.000	100	112147	12.5	9.39	
117 1-Methylnaphthalene	142	22.545	22.545	0.000	100	136943	12.5	11.1	
141 1,2-Dibromo-3-Chloropropan	157	20.189	20.189	0.000	82	39816	NR	NR	
A 118 C6 Range	1	8.575	(8.515-8.634)		0	1492736	2.00	2.52	
A 122 Toluene Range	1	14.191	(14.161-14.221)		0	713549	2.00	2.21	
A 123 C8 Range	1	14.861	(14.820-14.917)		0	1205323	2.00	2.41	
S 124 Xylenes, Total	100				0		6.00	6.71	

QC Flag Legend

Processing Flags
s - Failed ISTD Recovery Test

Report Date: 19-May-2014 11:19:49 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File: \\KNXCHROM\ChromData\MJ\20140515-684.b\JCCVE16.D

Injection Date: 16-May-2014 07:18:30 Instrument ID: MJ Operator ID: 7126

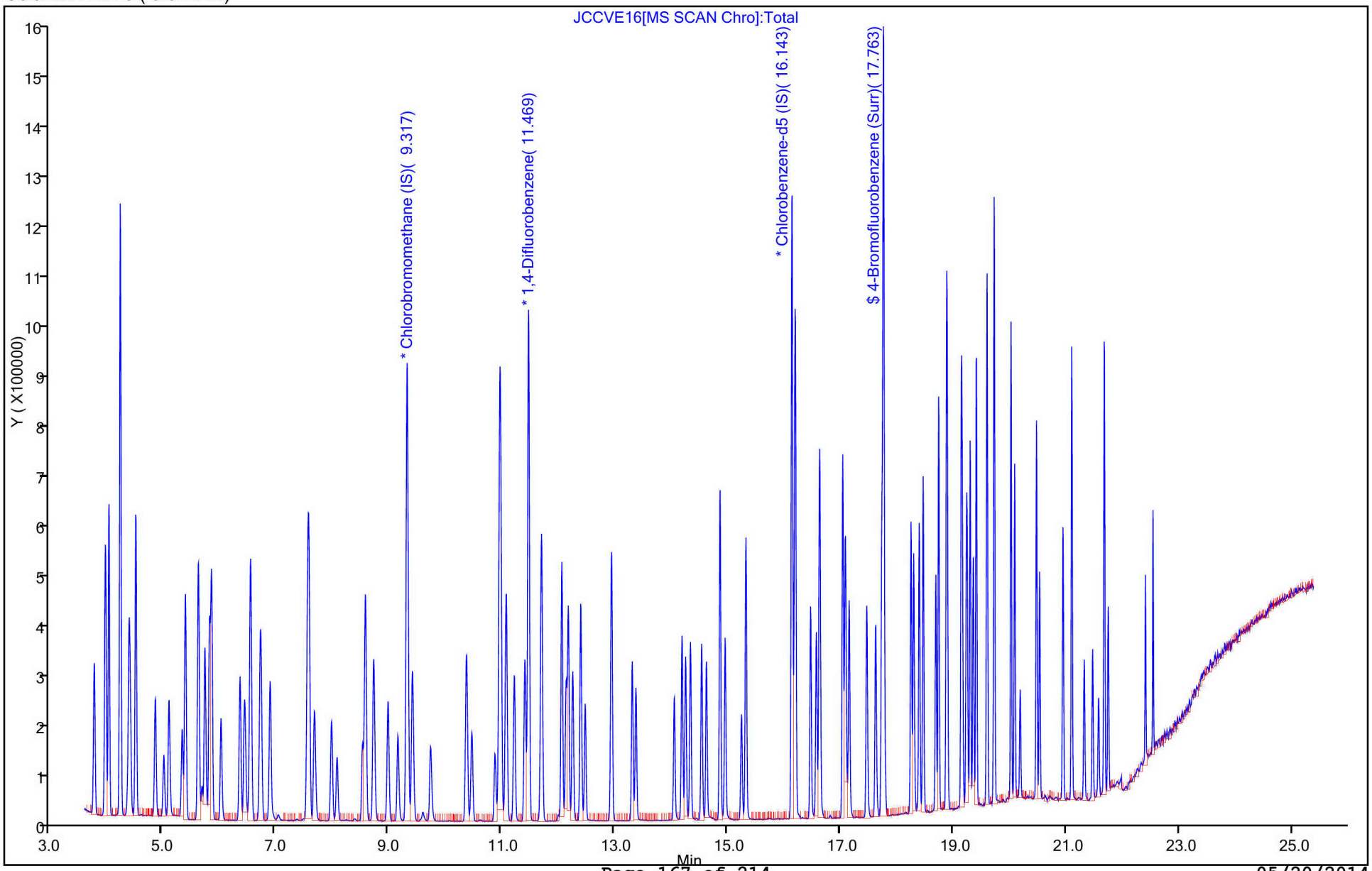
Lims ID: ccvis Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL Dil. Factor: 1.0000 ALS Bottle#: 3

Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JBFBC11.D				
Lims ID:	BFB	Lab Sample ID:			
Client ID:					
Sample Type:	BFB				
Inject. Date:	11-Mar-2014 12:12:30	ALS Bottle#:	16	Worklist Smp#:	1
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	BFB,,3,,,BFB				
Misc. Info.:	J031114I,BFB,,,,140-0000516-001				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\KNXCHROM\ChromData\MJ\20140311-516.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Mar-2014 13:55:12	Calib Date:	11-Mar-2014 19:57:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK021				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	On-Col Amt ppb v/v	Flags
$ 4 BFB	95	4.067	4.067	0.0	0	577512	NR	

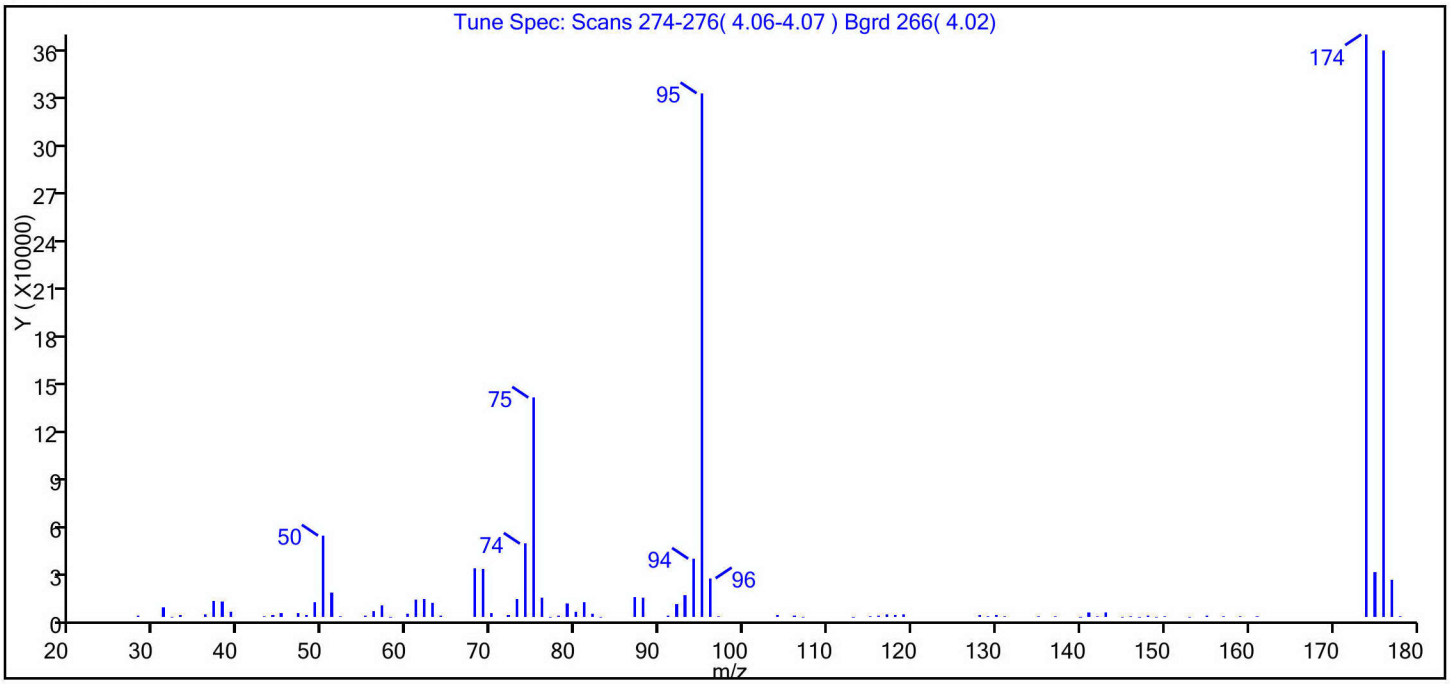
May 23, 2014

MS Tune Report

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JBFBC11.D				
Injection Date:	11-Mar-2014 12:12:30	Instrument ID:	MJ		
Lims ID:	BFB	Lab Sample ID:			
Client ID:					
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	1
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Tune Method:	BFB Method 8260				

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.60
75	30.00 - 60.00% of mass 95	41.90
96	5.00 - 9.00% of mass 95	7.40
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	111.20
175	5.00 - 9.00% of mass 174	8.50 (7.70)
176	95.00 - 101.00% of mass 174	108.10 (97.20)
177	5.00 - 9.00% of mass 176	7.20 (6.60)

May 23, 2014

Data File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JBFBC11.D\MJ_TO15.rslt\spectra.d
Injection Date: 11-Mar-2014 12:12:30
Spectrum: Tune Spec: Scans 274-276(4.06-4.07) Bgrd 266(4.02)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 85

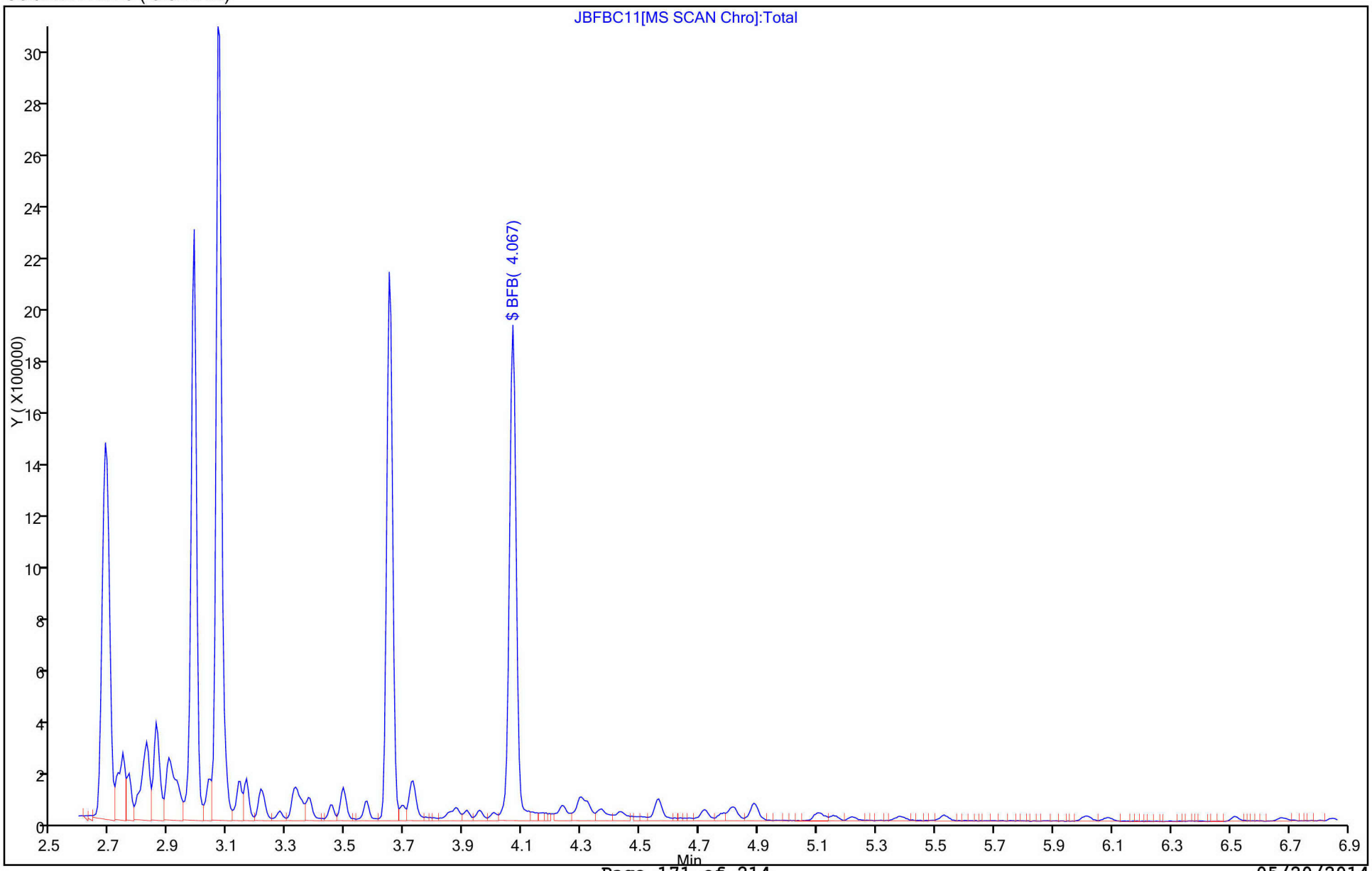
m/z	Y	m/z	Y	m/z	Y	m/z	Y
28.00	953	61.00	10830	92.00	8305	141.00	2961
31.00	6139	62.00	11271	93.00	13655	142.00	393
32.00	34	63.00	9021	94.00	36808	143.00	3028
33.00	1475	64.00	763	95.00	329664	145.00	103
36.00	1812	68.00	30888	96.00	24488	146.00	580
37.00	10300	69.00	30448	97.00	363	147.00	102
38.00	9642	70.00	2681	104.00	1481	148.00	873
39.00	3502	72.00	1219	106.00	1093	149.00	103
43.00	373	73.00	11227	107.00	287	150.00	366
44.00	1174	74.00	46248	113.00	104	153.00	104
45.00	2439	75.00	138176	115.00	366	155.00	974
47.00	2486	76.00	12185	116.00	1129	157.00	736
48.00	1370	77.00	211	117.00	1684	159.00	420
49.00	9471	78.00	817	118.00	1356	161.00	400
50.00	51344	79.00	8634	119.00	1577	174.00	366592
51.00	15289	80.00	3213	128.00	1285	175.00	28144
52.00	627	81.00	9265	129.00	646	176.00	356352
55.00	803	82.00	2083	130.00	1299	177.00	23688
56.00	3804	83.00	127	131.00	535	178.00	619
57.00	7571	87.00	12739	135.00	724		
58.00	240	88.00	12242	137.00	514		
60.00	2142	91.00	876	140.00	107		

Report Date: 14-Mar-2014 13:55:13 Chrom Revision: 2.1 15-Jan-2014 14:06:26

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JBFBC11.D				
Injection Date:	11-Mar-2014 12:12:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	BFB	Lab Sample ID:		Worklist Smp#:	1
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JBFBE15.D				
Lims ID:	bfb				
Client ID:					
Sample Type:	BFB				
Inject. Date:	15-May-2014 10:00:30	ALS Bottle#:	16	Worklist Smp#:	1
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	BFB,,3,,,bfb				
Misc. Info.:	J051514,BFB,,140-0000681-001				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\KNXCHROM\ChromData\MJ\20140514-681.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	16-May-2014 07:07:00	Calib Date:	11-Mar-2014 19:57:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK003				

First Level Reviewer: tajh Date: 16-May-2014 07:07:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 4 BFB	95	4.014	4.014	0.000	0	476982	NR	NR	

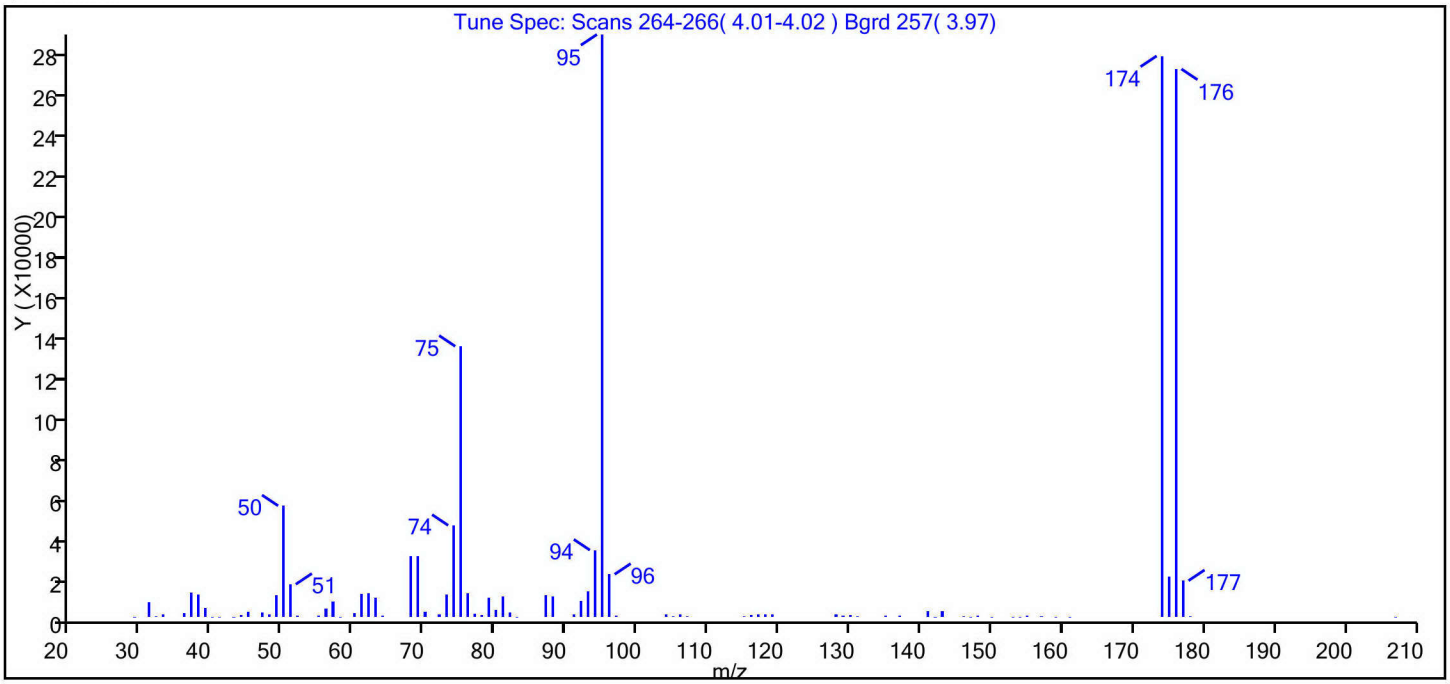
May 23, 2014

MS Tune Report

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JBFBE15.D				
Injection Date:	15-May-2014 10:00:30	Instrument ID:	MJ		
Lims ID:	bfb				
Client ID:					
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	1
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Tune Method:	BFB Method 8260				

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.10
75	30.00 - 60.00% of mass 95	46.50
96	5.00 - 9.00% of mass 95	7.40
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	96.30
175	5.00 - 9.00% of mass 174	7.00 (7.30)
176	95.00 - 101.00% of mass 174	94.10 (97.70)
177	5.00 - 9.00% of mass 176	6.30 (6.60)

Report Date: 16-May-2014 07:07:01 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

Data File: \\KNXCHROM\ChromData\MJ\20140514-681.b\JBFBE15.D\MJ_TO15.rslt\spectra.d
Injection Date: 15-May-2014 10:00:30
Spectrum: Tune Spec: Scans 264-266(4.01-4.02) Bgrd 257(3.97)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	68	58.00	223	88.00	10201	137.00	613
31.00	7252	60.00	2122	91.00	1224	141.00	2936
32.00	373	61.00	11562	92.00	7957	142.00	247
33.00	1467	62.00	11885	93.00	12571	143.00	3034
36.00	2087	63.00	9383	94.00	32928	146.00	465
37.00	12006	64.00	854	95.00	286080	147.00	100
38.00	11143	68.00	29880	96.00	21048	148.00	843
39.00	4462	69.00	30016	97.00	656	150.00	253
40.00	88	70.00	2534	104.00	1372	153.00	112
41.00	104	72.00	1276	105.00	475	154.00	213
43.00	106	73.00	11073	106.00	1410	155.00	814
44.00	1204	74.00	45088	107.00	372	157.00	514
45.00	2671	75.00	132992	115.00	388	159.00	248
47.00	2405	76.00	11887	116.00	1181	161.00	268
48.00	1366	77.00	1732	117.00	1458	174.00	275520
49.00	10931	78.00	1013	118.00	1303	175.00	20048
50.00	54688	79.00	9489	119.00	1485	176.00	269120
51.00	16165	80.00	3517	128.00	1215	177.00	17896
52.00	640	81.00	10115	129.00	601	178.00	503
55.00	791	82.00	2417	130.00	1197	207.00	108
56.00	4062	83.00	110	131.00	500		
57.00	7695	87.00	10681	135.00	657		

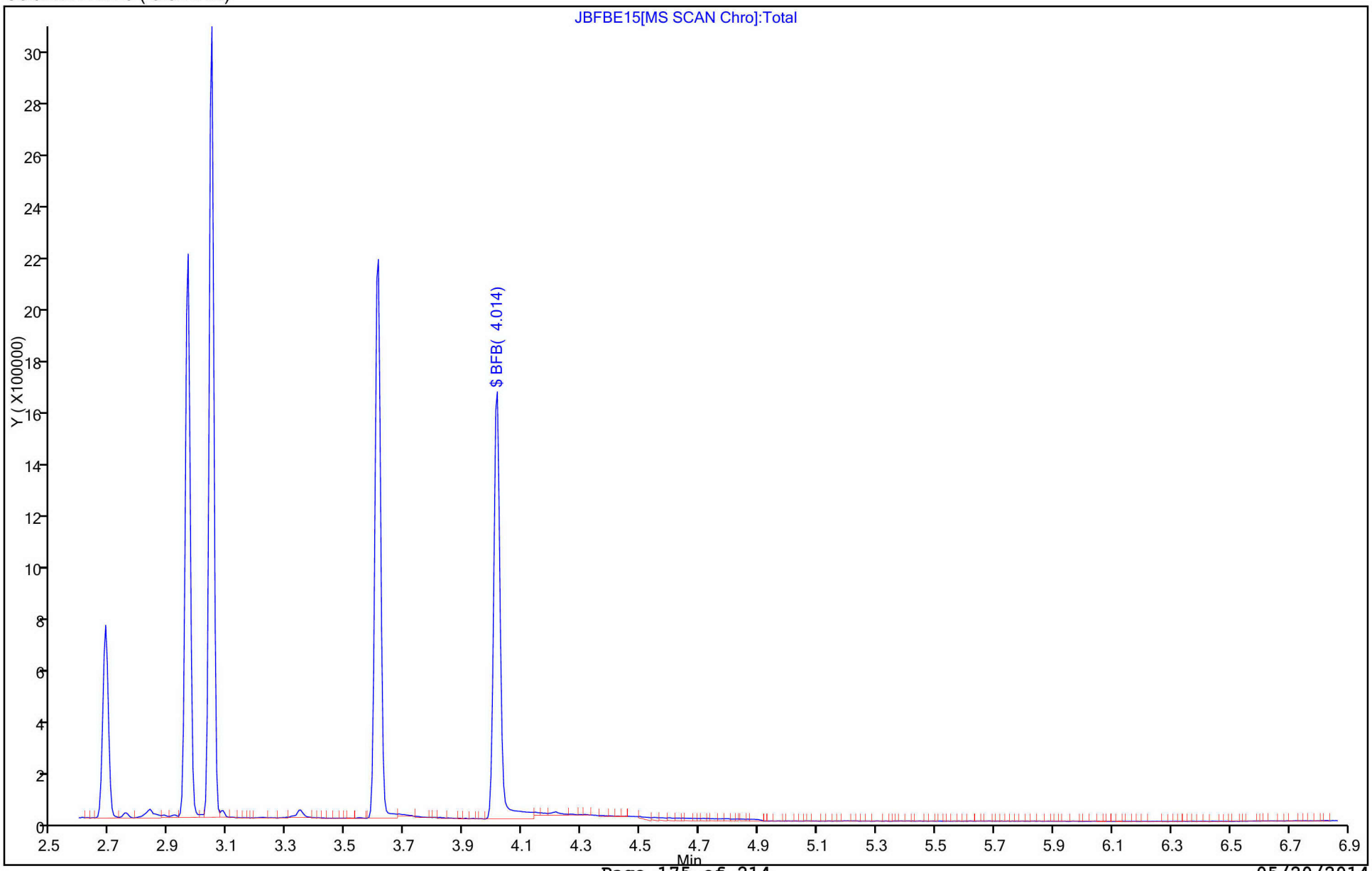
Report Date: 16-May-2014 07:07:01 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\JBFBE15.D				
Injection Date:	15-May-2014 10:00:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	bfb			Worklist Smp#:	1
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140515-684.b\JBFBE16.D				
Lims ID:	bfb				
Client ID:					
Sample Type:	BFB				
Inject. Date:	16-May-2014 06:51:30	ALS Bottle#:	16	Worklist Smp#:	1
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	BFB,,3,,,bfb				
Misc. Info.:	J051614,BFB,,140-0000684-001				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\KNXCHROM\ChromData\MJ\20140515-684.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-May-2014 11:18:48	Calib Date:	11-Mar-2014 19:57:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK002				
First Level Reviewer: tajh		Date:	19-May-2014 11:18:47		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 4 BFB	95	4.021	4.021	0.000	0	560135	NR	NR	

Report Date: 19-May-2014 11:18:48 Chrom Revision: 2.2 14-Apr-2014 13:40:08

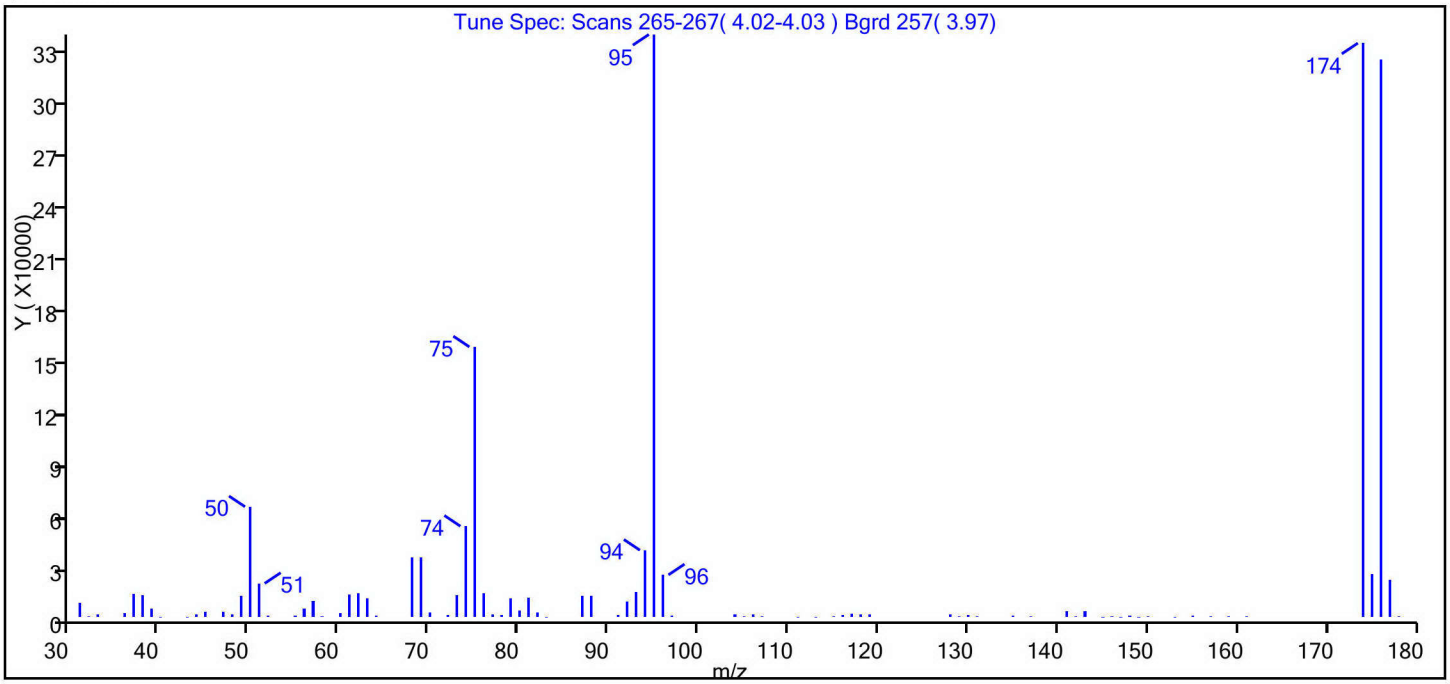
May 23, 2014

MS Tune Report

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140515-684.b\JBFBE16.D				
Injection Date:	16-May-2014 06:51:30	Instrument ID:	MJ		
Lims ID:	bfb				
Client ID:					
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	1
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Tune Method:	BFB Method 8260				

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.00
75	30.00 - 60.00% of mass 95	46.40
96	5.00 - 9.00% of mass 95	7.30
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	98.50
175	5.00 - 9.00% of mass 174	7.40 (7.50)
176	95.00 - 101.00% of mass 174	95.70 (97.20)
177	5.00 - 9.00% of mass 176	6.40 (6.70)

Report Date: 19-May-2014 11:18:48 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

Data File: \\KNXCHROM\ChromData\MJ\20140515-684.b\JBFBE16.D\MJ_TO15.rslt\spectra.d
Injection Date: 16-May-2014 06:51:30
Spectrum: Tune Spec: Scans 265-267(4.02-4.03) Bgrd 257(3.97)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	8106	61.00	12893	92.00	8928	137.00	640
32.00	605	62.00	13497	93.00	14207	141.00	3437
33.00	1695	63.00	10597	94.00	38032	142.00	435
36.00	2284	64.00	957	95.00	331008	143.00	3540
37.00	13231	68.00	33872	96.00	24048	145.00	254
38.00	12589	69.00	34120	97.00	724	146.00	534
39.00	5034	70.00	2793	104.00	1573	147.00	113
40.00	219	72.00	1356	105.00	608	148.00	854
43.00	103	73.00	12664	106.00	1597	149.00	118
44.00	1499	74.00	51672	107.00	440	150.00	450
45.00	2994	75.00	153536	111.00	127	153.00	225
47.00	2885	76.00	13476	113.00	103	155.00	883
48.00	1543	77.00	1594	115.00	395	157.00	625
49.00	12014	78.00	1050	116.00	1341	159.00	433
50.00	62744	79.00	10545	117.00	1894	161.00	324
51.00	19168	80.00	3851	118.00	1436	174.00	326080
52.00	764	81.00	11210	119.00	1755	175.00	24560
55.00	875	82.00	2747	128.00	1445	176.00	316864
56.00	4706	83.00	249	129.00	592	177.00	21200
57.00	9130	87.00	12246	130.00	1400	178.00	591
58.00	384	88.00	12224	131.00	574		
60.00	2480	91.00	1339	135.00	751		

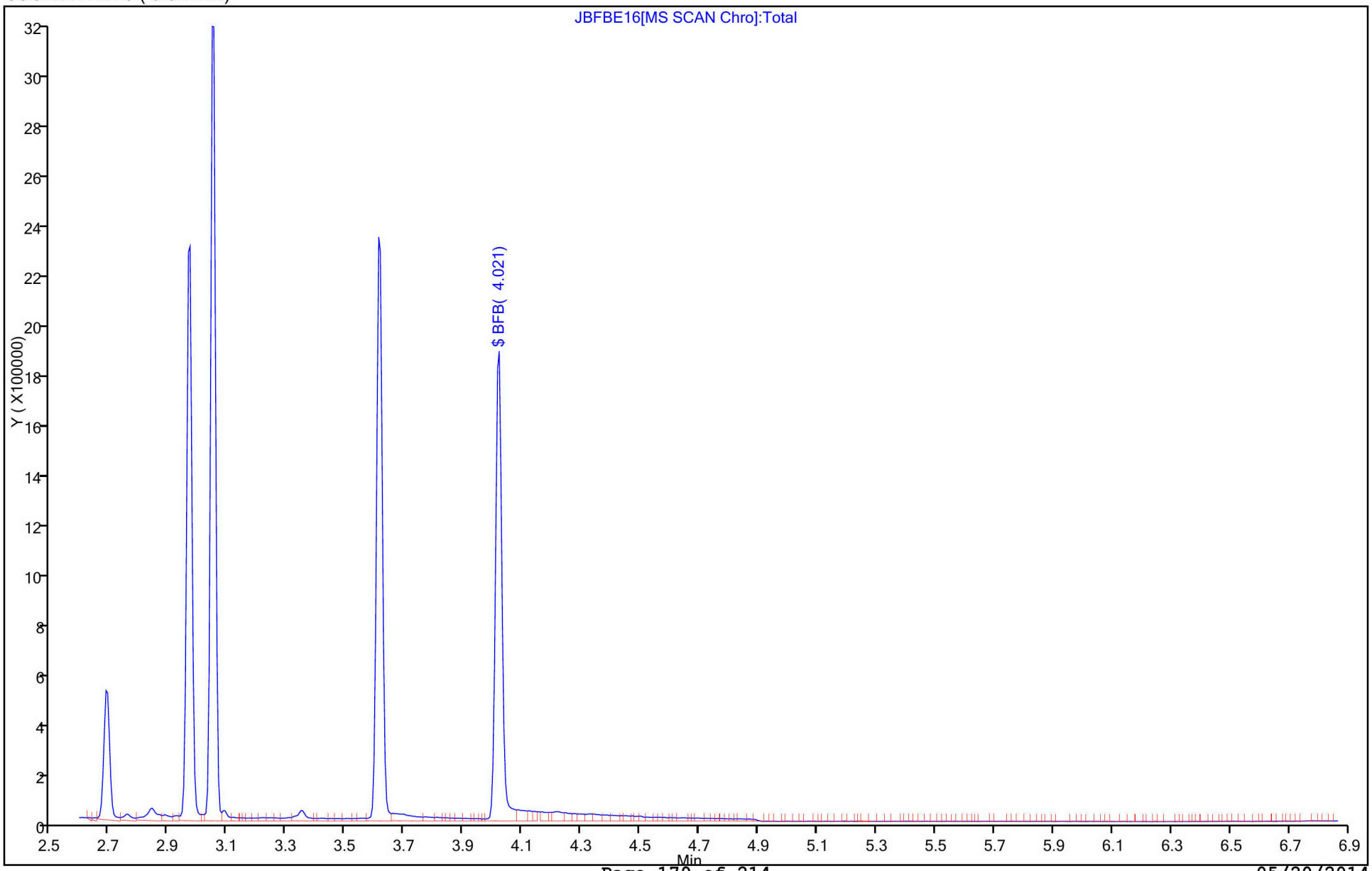
Report Date: 19-May-2014 11:18:48 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140515-684.b\JBFBE16.D				
Injection Date:	16-May-2014 06:51:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	bfb			Worklist Smp#:	1
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I

AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Client Sample ID: Lab Sample ID: MB 140-1222/4

Matrix: Air Lab File ID: MB500mL.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 05/15/2014 12:25

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 1222 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.080	0.012
75-35-4	1,1-Dichloroethene	ND		0.080	0.014
107-06-2	1,2-Dichloroethane	ND		0.080	0.019
67-64-1	Acetone	ND		2.0	0.54
71-43-2	Benzene	ND		0.080	0.023
56-23-5	Carbon tetrachloride	ND		0.080	0.015
67-66-3	Chloroform	ND		0.080	0.015
124-48-1	Dibromochloromethane	ND		0.080	0.017
75-09-2	Methylene Chloride	ND		0.20	0.13
79-01-6	Trichloroethene	ND		0.040	0.014
75-01-4	Vinyl chloride	ND		0.080	0.029

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140514-681.b\MB500mL.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	15-May-2014 12:25:30	ALS Bottle#:	16	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	MB500mL				
Misc. Info.:	J051514,TO15,,140-0000681-004				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\KNXCHROM\ChromData\MJ\20140514-681.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	16-May-2014 07:07:46	Calib Date:	11-Mar-2014 19:57:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK003				
First Level Reviewer: tajh		Date:	15-May-2014 13:07:30		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.313	9.318	-0.005	97	234071	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.470	11.475	-0.005	96	1163562	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.144	16.145	-0.001	90	927675	4.00	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.769	17.769	0.000	85	658559	4.00	4.01	
T 136 Methanol TIC	31	4.369	4.395	-0.031	88	4240		0.0725	

Report Date: 16-May-2014 07:08:20 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File: \\KNXCHROM\ChromData\MJ\20140514-681.b\MB500mL.D

Injection Date: 15-May-2014 12:25:30 Instrument ID: MJ Operator ID: 7126

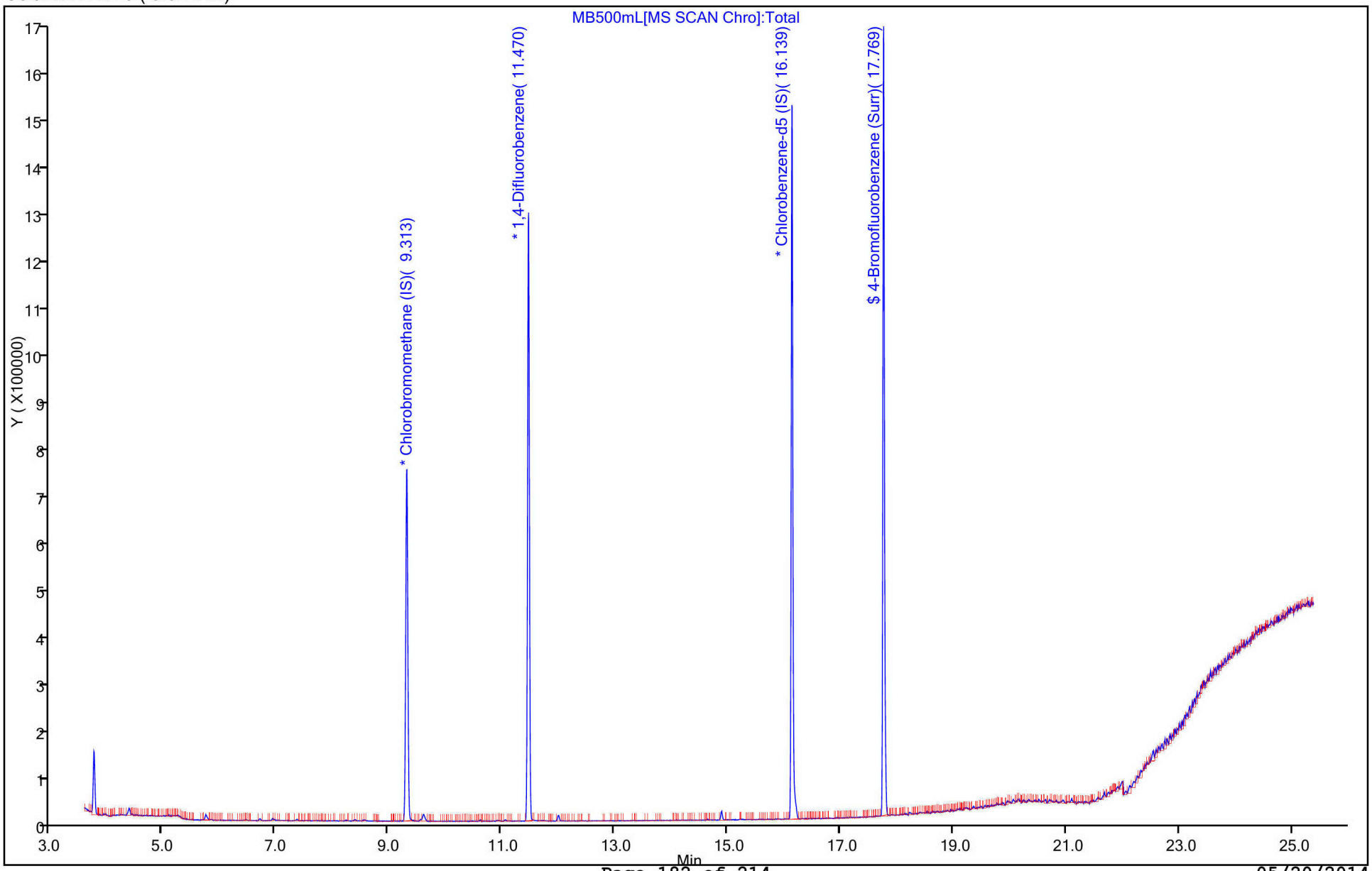
Lims ID: mb Worklist Smp#: 4

Client ID:

Purge Vol: 500.000 mL Dil. Factor: 1.0000 ALS Bottle#: 16

Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



May 23, 2014

FORM I

AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Client Sample ID: Lab Sample ID: MB 140-1228/5

Matrix: Air Lab File ID: MB500mL.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 05/16/2014 09:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 1228 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.080	0.012
75-35-4	1,1-Dichloroethene	ND		0.080	0.014
107-06-2	1,2-Dichloroethane	ND		0.080	0.019
67-64-1	Acetone	ND		2.0	0.54
71-43-2	Benzene	ND		0.080	0.023
56-23-5	Carbon tetrachloride	ND		0.080	0.015
67-66-3	Chloroform	ND		0.080	0.015
124-48-1	Dibromochloromethane	ND		0.080	0.017
75-09-2	Methylene Chloride	ND		0.20	0.13
79-01-6	Trichloroethene	0.0500		0.040	0.014
75-01-4	Vinyl chloride	ND		0.080	0.029

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

May 23, 2014

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\KNXCHROM\ChromData\MJ\20140515-684.b\MB500mL.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	16-May-2014 09:43:30	ALS Bottle#:	16	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	MB500mL				
Misc. Info.:	J051614,TO15,,140-0000684-005				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\KNXCHROM\ChromData\MJ\20140515-684.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-May-2014 11:19:48	Calib Date:	11-Mar-2014 19:57:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK002				

First Level Reviewer: tajh Date: 19-May-2014 11:20:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.307	9.312	-0.005	97	233782	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.464	11.469	-0.005	96	1066738	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.139	16.143	-0.004	90	842601	4.00	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.764	17.763	0.001	84	595842	4.00	4.00	
7 Propene	41	3.971	3.970	0.001	80	3070		0.0428	
19 2-Methylbutane	43	5.380	5.385	-0.004	84	12347		0.1244	
25 Pentane	72	5.843	5.847	-0.004	95	3832		0.3046	
56 Trichloroethene	130	12.169	12.173	-0.004	54	4443		0.0500	
T 136 Methanol TIC	31	4.369	4.401	-0.031	66	5663		0.0969	

Report Date: 19-May-2014 11:20:26 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File: \\KNXCHROM\ChromData\MJ\20140515-684.b\MB500mL.D

Injection Date: 16-May-2014 09:43:30 Instrument ID: MJ Operator ID: 7126

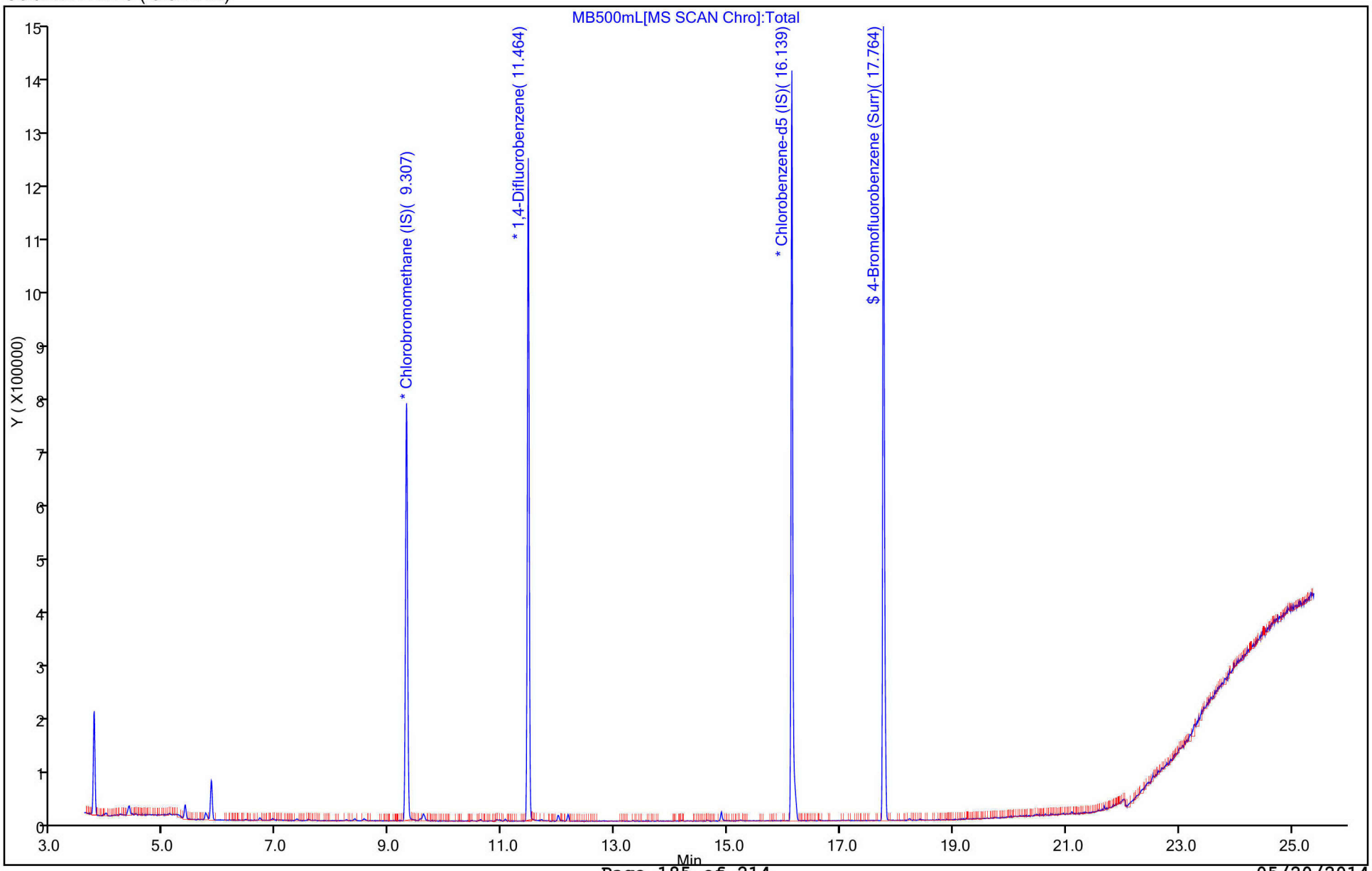
Lims ID: mb Worklist Smp#: 5

Client ID:

Purge Vol: 500.000 mL Dil. Factor: 1.0000 ALS Bottle#: 16

Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



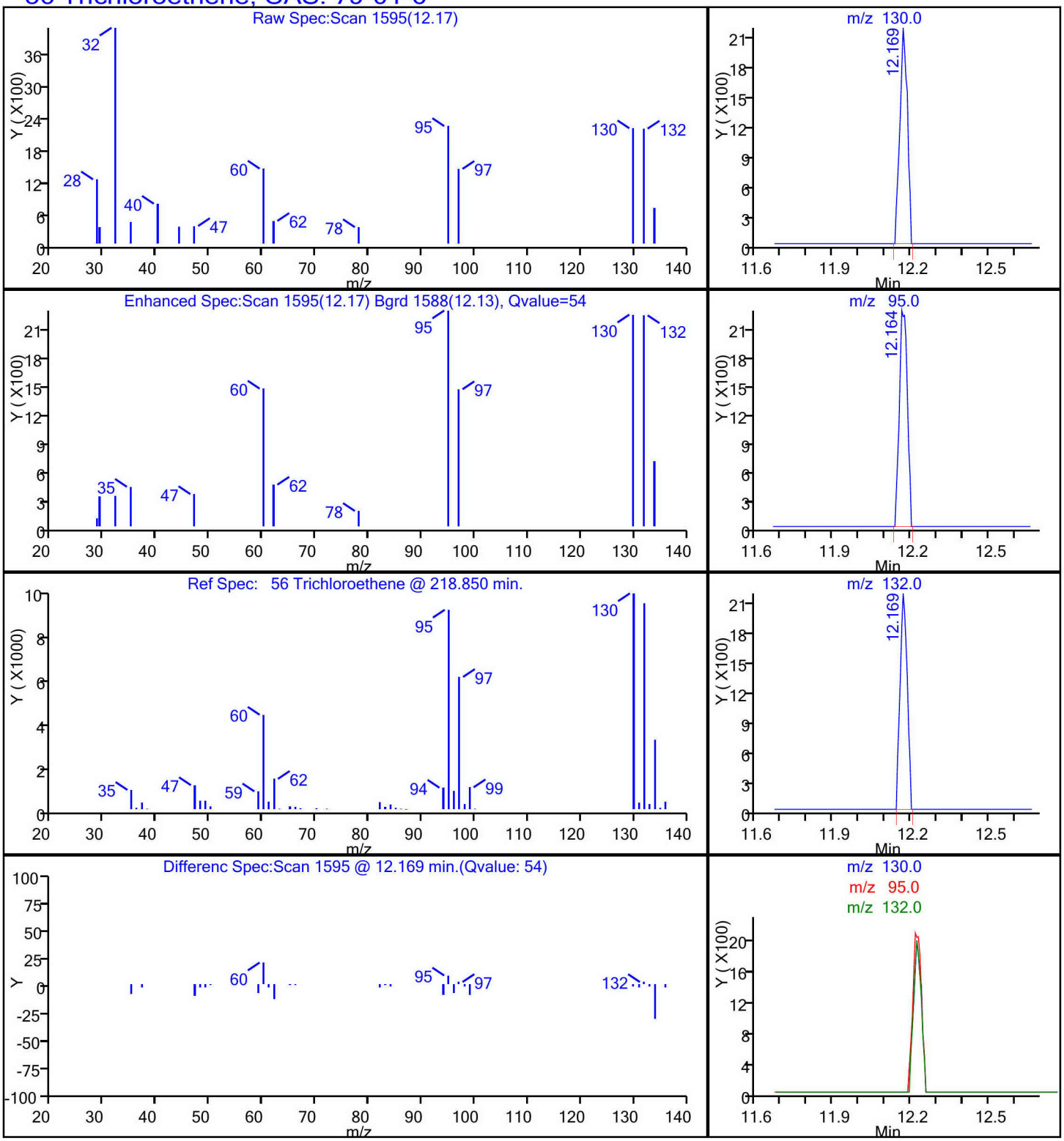
Report Date: 19-May-2014 11:20:26 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Knoxville

Data File:	\\KNXCHROM\ChromData\MJ\20140515-684.b\MB500mL.D				
Injection Date:	16-May-2014 09:43:30	Instrument ID:	MJ		
Lims ID:	mb				
Client ID:					
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

56 Trichloroethene, CAS: 79-01-6



FORM I

AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1353-1

SDG No.: W06725

Client Sample ID: | Lab Sample ID: LCS 140-1222/1002

Matrix: Air | Lab File ID: JCCVE15-LCS.d

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 100(mL) | Date Analyzed: 05/15/2014 10:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1222 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	2.33		0.080	0.012
75-35-4	1,1-Dichloroethene	2.12		0.080	0.014
107-06-2	1,2-Dichloroethane	2.49		0.080	0.019
67-64-1	Acetone	4.48		2.0	0.54
71-43-2	Benzene	2.11		0.080	0.023
56-23-5	Carbon tetrachloride	2.00		0.080	0.015
67-66-3	Chloroform	2.28		0.080	0.015
124-48-1	Dibromochloromethane	1.91		0.080	0.017
75-09-2	Methylene Chloride	2.19		0.20	0.13
79-01-6	Trichloroethene	1.91		0.040	0.014
75-01-4	Vinyl chloride	2.51		0.080	0.029

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	113		60-140

May 23, 2014

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\KNXCHROM\ChromData\MJ\20140514-681.b\JCCVE15-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 15-May-2014 10:30:30 ALS Bottle#: 3 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: CCV/LCS,,2,6,,ccvis
Misc. Info.: J051514,TO15,,140-0000681-002
Operator ID: 7126 Instrument ID: MJ

Method: \\KNXCHROM\ChromData\MJ\20140514-681.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 16-May-2014 07:07:46 Calib Date: 11-Mar-2014 19:57:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: tajh Date: 16-May-2014 07:07:46

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.318	9.318	0.000	94	190618	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.475	11.475	0.000	94	884388	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.145	16.145	0.000	90	733477	4.00	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.769	17.769	0.000	84	583788	4.00	4.50	
6 Chlorodifluoromethane	67	3.960	3.960	0.000	94	50911	2.00	2.59	
7 Propene	41	3.971	3.971	0.000	89	171097	2.00	2.93	
8 Dichlorodifluoromethane	85	4.025	4.025	0.000	100	521798	2.00	2.76	
9 Chloromethane	52	4.224	4.224	0.000	58	56712	2.00	2.64	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.229	4.229	0.000	92	354686	2.00	2.49	
11 Acetaldehyde	44	4.385	4.385	0.000	95	211186	10.0	11.2	
12 Vinyl chloride	62	4.407	4.407	0.000	99	177351	2.00	2.51	
14 Butadiene	54	4.503	4.503	0.000	66	121986	2.00	2.48	
13 Butane	43	4.503	4.503	0.000	85	258542	2.00	2.57	
15 Bromomethane	94	4.848	4.848	0.000	97	167824	2.00	2.34	
16 Chloroethane	64	5.004	5.004	0.000	93	74146	2.00	2.28	
17 Ethanol	31	5.095	5.095	0.000	97	218987	10.0	14.3	
18 Vinyl bromide	106	5.326	5.326	0.000	96	132884	2.00	2.17	
19 2-Methylbutane	43	5.386	5.386	0.000	94	204846	2.00	2.53	
20 Trichlorofluoromethane	101	5.617	5.617	0.000	97	399856	2.00	2.41	
21 Acrolein	56	5.617	5.617	0.000	6	30873	2.00	1.98	
22 Acetonitrile	40	5.682	5.682	0.000	94	45806	2.00	2.67	
23 Acetone	58	5.730	5.730	0.000	57	121338	6.00	4.48	
24 Isopropyl alcohol	45	5.811	5.811	0.000	97	481553	6.00	6.73	
25 Pentane	72	5.848	5.848	0.000	97	22979	2.00	2.24	
26 Ethyl ether	31	6.015	6.015	0.000	86	142324	2.00	2.85	
27 1,1-Dichloroethene	96	6.354	6.354	0.000	90	113564	2.00	2.12	
28 2-Methyl-2-propanol	59	6.429	6.429	0.000	89	194073	2.00	2.20	
29 Acrylonitrile	53	6.445	6.445	0.000	50	64313	2.00	2.27	
30 1,1,2-Trichloro-1,2,2-trif	101	6.542	6.542	0.000	91	263079	2.00	2.29	
31 Methylene Chloride	84	6.709	6.709	0.000	93	111468	2.00	2.19	
32 3-Chloro-1-propene	39	6.725	6.725	0.000	91	130486	2.00	2.46	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.887	6.887	0.000	99	409021	2.00	2.28	
34 trans-1,2-Dichloroethene	96	7.548	7.548	0.000	94	134718	2.00	2.09	
35 2-Methylpentane	43	7.575	7.575	0.000	96	394131	2.00	2.68	
36 Methyl tert-butyl ether	73	7.672	7.672	0.000	94	219251	2.00	2.25	
37 1,1-Dichloroethane	63	7.979	7.979	0.000	99	245512	2.00	2.44	
38 Vinyl acetate	43	8.075	8.075	0.000	100	219715	2.00	2.49	
39 2-Butanone (MEK)	72	8.527	8.527	0.000	72	38291	2.00	2.12	
40 Hexane	56	8.581	8.581	0.000	86	120028	2.00	2.34	
139 Isopropyl ether	45	8.726	8.726	0.000	96	344509	2.00	2.57	
41 cis-1,2-Dichloroethene	96	8.979	8.979	0.000	97	119493	2.00	2.17	
42 Ethyl acetate	43	9.151	9.151	0.000	95	205834	2.00	2.62	
43 Chloroform	83	9.329	9.329	0.000	63	253788	2.00	2.28	
142 Tert-butyl ethyl ether	59	9.415	9.415	0.000	98	281228	2.00	2.31	
44 Tetrahydrofuran	42	9.738	9.738	0.000	92	112894	2.00	2.56	
45 1,1,1-Trichloroethane	97	10.372	10.372	0.000	88	269738	2.00	2.33	
46 1,2-Dichloroethane	62	10.469	10.469	0.000	97	170586	2.00	2.49	
47 n-Butanol	31	10.873	10.873	0.000	14	53103	2.00	2.75	
48 Benzene	78	10.953	10.953	0.000	97	320885	2.00	2.11	
49 Cyclohexane	69	10.964	10.964	0.000	84	68133	2.00	2.28	
50 Carbon tetrachloride	117	10.980	10.980	0.000	91	250929	2.00	2.00	
51 2,3-Dimethylpentane	71	11.077	11.077	0.000	91	79414	2.00	2.22	
52 Thiophene	84	11.222	11.222	0.000	96	201948	2.00	2.16	
140 Tert-amyl methyl ether	73	11.405	11.405	0.000	80	247681	2.00	2.17	
53 Isooctane	57	11.701	11.701	0.000	96	598149	2.00	2.31	
54 n-Heptane	71	12.062	12.062	0.000	96	111161	2.00	2.07	
55 1,2-Dichloropropane	63	12.137	12.137	0.000	87	112771	2.00	2.20	
56 Trichloroethene	130	12.180	12.180	0.000	91	140506	2.00	1.91	
57 Dibromomethane	93	12.255	12.255	0.000	77	145106	2.00	2.15	
59 Dichlorobromomethane	83	12.395	12.395	0.000	96	231462	2.00	2.16	
58 1,4-Dioxane	88	12.406	12.406	0.000	32	39064	2.00	2.13	
60 Methyl methacrylate	41	12.476	12.476	0.000	85	118038	2.00	2.57	
61 Methylcyclohexane	83	12.944	12.944	0.000	91	215338	2.00	2.11	
62 4-Methyl-2-pentanone (MIBK	43	13.310	13.310	0.000	99	230522	2.00	2.49	
63 cis-1,3-Dichloropropene	75	13.374	13.374	0.000	96	148243	2.00	2.04	
64 trans-1,3-Dichloropropene	75	14.057	14.057	0.000	95	133169	2.00	2.19	
65 Toluene	91	14.192	14.192	0.000	90	277003	2.00	2.04	
66 1,1,2-Trichloroethane	83	14.256	14.256	0.000	75	94257	2.00	2.19	
67 2-Methylthiophene	97	14.342	14.342	0.000	99	250292	2.00	2.05	
68 3-Methylthiophene	97	14.541	14.541	0.000	99	242850	2.00	1.98	
69 2-Hexanone	58	14.628	14.628	0.000	90	101555	2.00	2.28	
70 n-Octane	85	14.870	14.870	0.000	97	98414	2.00	1.97	
71 Chlorodibromomethane	129	14.961	14.961	0.000	94	181522	2.00	1.91	
72 Ethylene Dibromide	107	15.246	15.246	0.000	97	150583	2.00	2.04	
73 Tetrachloroethene	129	15.327	15.327	0.000	86	113609	2.00	1.79	
75 Chlorobenzene	112	16.193	16.193	0.000	76	211689	2.00	1.82	
74 2,3-Dimethylheptane	43	16.204	16.204	0.000	92	398334	2.00	2.66	
76 Ethylbenzene	91	16.473	16.473	0.000	98	303106	2.00	2.02	
77 2-Ethylthiophene	97	16.575	16.575	0.000	98	240121	2.00	2.04	
78 m-Xylene & p-Xylene	91	16.634	16.634	0.000	98	483053	4.00	3.98	
79 n-Nonane	57	17.043	17.043	0.000	94	214881	2.00	2.28	
81 Bromoform	173	17.086	17.086	0.000	80	132444	2.00	1.76	
80 Styrene	104	17.097	17.097	0.000	90	161627	2.00	1.94	

May 23, 2014

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
82 o-Xylene	91	17.156	17.156	0.000	78	258105	2.00	2.10	
83 1,1,2,2-Tetrachloroethane	83	17.468	17.468	0.000	98	209933	2.00	2.09	
84 1,2,3-Trichloropropane	110	17.629	17.629	0.000	95	47797	2.00	1.98	
85 Isopropylbenzene	105	17.737	17.737	0.000	98	348315	2.00	1.99	
86 N-Propylbenzene	120	18.259	18.259	0.000	95	85119	2.00	1.84	
87 2-Chlorotoluene	126	18.307	18.307	0.000	49	87189	2.00	1.81	
88 4-Ethyltoluene	105	18.399	18.399	0.000	97	320228	2.00	1.96	
89 1,3,5-Trimethylbenzene	120	18.468	18.468	0.000	91	150226	2.00	1.83	
90 Alpha Methyl Styrene	118	18.694	18.694	0.000	81	111088	2.00	1.89	
91 n-Decane	57	18.748	18.748	0.000	85	232524	2.00	2.31	
92 tert-Butylbenzene	119	18.888	18.888	0.000	81	305784	2.00	1.91	
93 1,2,4-Trimethylbenzene	105	18.899	18.899	0.000	89	280602	2.00	1.97	
94 sec-Butylbenzene	105	19.146	19.146	0.000	97	420664	2.00	2.01	
95 1,3-Dichlorobenzene	146	19.168	19.168	0.000	98	150775	2.00	1.61	
96 Benzyl chloride	91	19.238	19.238	0.000	97	201225	2.00	1.89	
97 1,4-Dichlorobenzene	146	19.254	19.254	0.000	92	136937	2.00	1.57	
98 4-Isopropyltoluene	119	19.308	19.308	0.000	77	321889	2.00	1.92	
99 1,2,3-Trimethylbenzene	105	19.361	19.361	0.000	67	233493	2.00	2.01	
100 Butylcyclohexane	83	19.415	19.415	0.000	88	276374	2.00	2.09	
101 2,3-Dihydroindene	117	19.604	19.604	0.000	88	237529	2.00	1.83	
102 1,2-Dichlorobenzene	146	19.604	19.604	0.000	76	148393	2.00	1.62	
104 Indene	116	19.733	19.733	0.000	78	211029	2.00	1.86	
103 n-Butylbenzene	91	19.733	19.733	0.000	95	310354	2.00	2.00	
105 Undecane	57	20.029	20.029	0.000	91	229882	2.00	2.27	
106 1,2-Dimethyl-4-Ethylbenzen	119	20.093	20.093	0.000	96	279046	2.00	1.78	
108 1,2,4,5-Tetramethylbenzene	119	20.480	20.480	0.000	96	296640	2.00	1.88	
107 1,2,3,5-Tetramethylbenzene	119	20.534	20.534	0.000	93	184458	2.00	1.79	
109 1,2,3,4-Tetramethylbenzene	119	20.948	20.948	0.000	95	229176	2.00	1.79	
110 Dodecane	57	21.104	21.104	0.000	90	219269	2.00	2.09	
111 1,2,4-Trichlorobenzene	180	21.325	21.325	0.000	88	57149	2.00	1.40	
112 Naphthalene	128	21.476	21.476	0.000	98	171420	2.00	1.49	
113 Benzo(b)thiophene	134	21.583	21.583	0.000	97	100575	2.00	1.29	
114 Hexachlorobutadiene	225	21.685	21.685	0.000	80	116906	2.00	1.40	
115 1,2,3-Trichlorobenzene	180	21.755	21.755	0.000	93	71520	2.00	1.36	
116 2-Methylnaphthalene	142	22.412	22.412	0.000	98	76608	12.5	6.24	
117 1-Methylnaphthalene	142	22.546	22.546	0.000	99	96445	12.5	7.62	
141 1,2-Dibromo-3-Chloropropan	157	20.195	20.195	0.000	84	34457	NR	NR	
A 118 C6 Range	1	8.576	(8.516-8.635)		0	1484471	2.00	2.67	
A 122 Toluene Range	1	14.192	(14.162-14.222)		0	698686	2.00	2.11	
A 123 C8 Range	1	14.870	(14.821-14.918)		0	1148566	2.00	2.24	
S 124 Xylenes, Total	100				0		6.00	6.08	

Report Date: 16-May-2014 07:07:54 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Laboratories

Data File: \\KNXCHROM\ChromData\MJ\20140514-681.b\JCCVE15-LCS.d

Injection Date: 15-May-2014 10:30:30 Instrument ID: MJ Operator ID: 7126

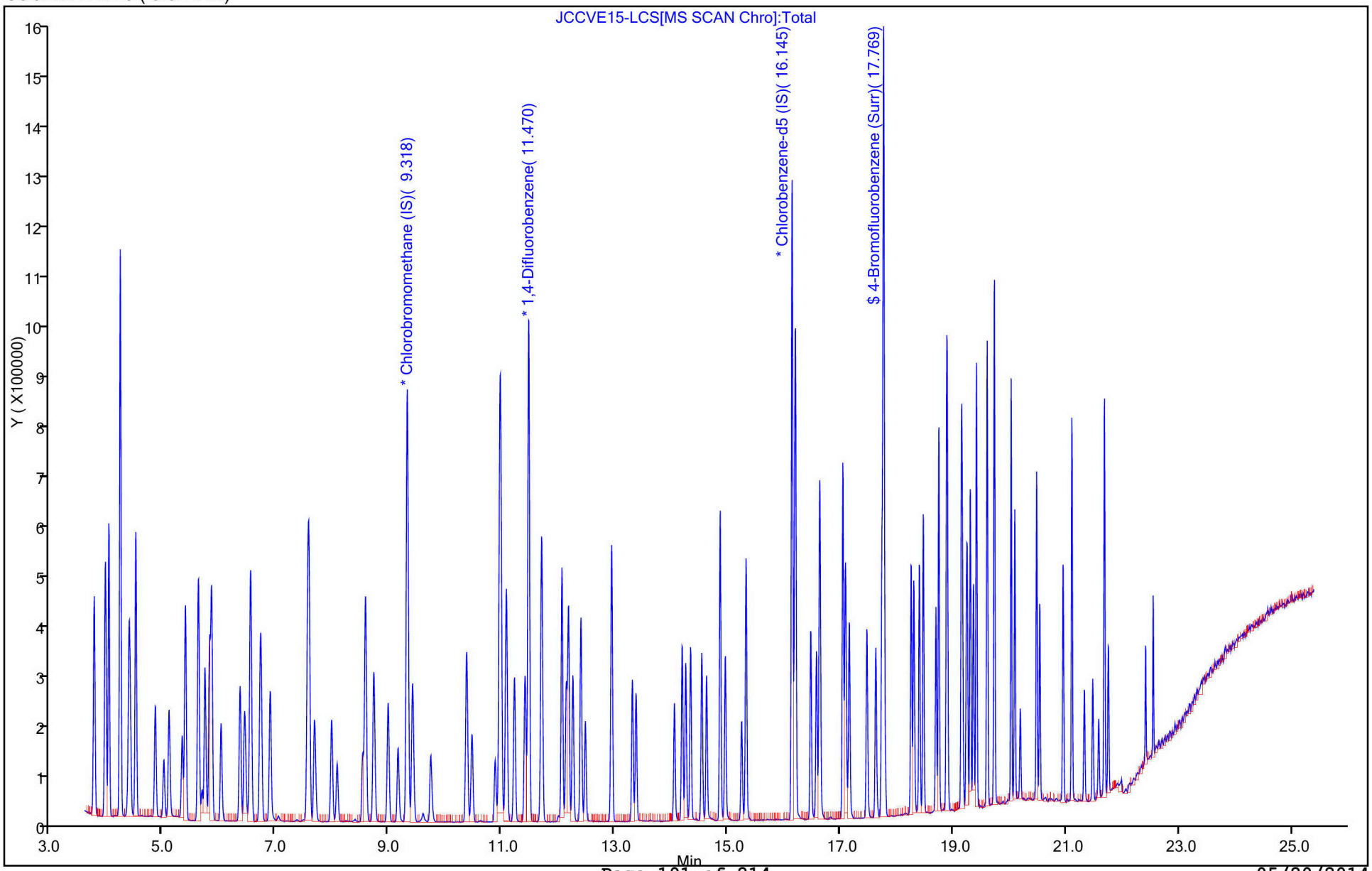
Lims ID: LCS Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL Dil. Factor: 1.0000 ALS Bottle#: 3

Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I

AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-1353-1

SDG No.: W06725

Client Sample ID: | Lab Sample ID: LCS 140-1228/1002

Matrix: Air | Lab File ID: JCCVE16-LCS.d

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 100(mL) | Date Analyzed: 05/16/2014 07:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 1228 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	2.11		0.080	0.012
75-35-4	1,1-Dichloroethene	2.06		0.080	0.014
107-06-2	1,2-Dichloroethane	2.42		0.080	0.019
67-64-1	Acetone	4.59		2.0	0.54
71-43-2	Benzene	2.12		0.080	0.023
56-23-5	Carbon tetrachloride	1.96		0.080	0.015
67-66-3	Chloroform	2.11		0.080	0.015
124-48-1	Dibromochloromethane	2.06		0.080	0.017
75-09-2	Methylene Chloride	2.06		0.20	0.13
79-01-6	Trichloroethene	1.86		0.040	0.014
75-01-4	Vinyl chloride	2.45		0.080	0.029

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	112		60-140

May 23, 2014

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\KNXCHROM\ChromData\MJ\20140515-684.b\JCCVE16-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 16-May-2014 07:18:30 ALS Bottle#: 3 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: CCV/LCS,,2,6,,ccvis
Misc. Info.: J051614,TO15,,140-0000684-002
Operator ID: 7126 Instrument ID: MJ

Method: \\KNXCHROM\ChromData\MJ\20140515-684.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-May-2014 11:19:48 Calib Date: 11-Mar-2014 19:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\KNXCHROM\ChromData\MJ\20140311-516.b\JICC119.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK002

First Level Reviewer: tajh Date: 19-May-2014 11:19:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.312	9.312	0.000	96	202717	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.469	11.469	0.000	94	877830	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.143	16.143	0.000	90	713396	4.00	4.00	
$ 5 4-Bromofluorobenzene (Surr	95	17.763	17.763	0.000	85	567576	4.00	4.50	
6 Chlorodifluoromethane	67	3.959	3.959	0.000	97	53316	2.00	2.55	
7 Propene	41	3.970	3.970	0.000	99	175017	2.00	2.82	
8 Dichlorodifluoromethane	85	4.029	4.029	0.000	100	540322	2.00	2.69	
9 Chloromethane	52	4.223	4.223	0.000	98	57233	2.00	2.51	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.228	4.228	0.000	94	378963	2.00	2.50	
11 Acetaldehyde	44	4.384	4.384	0.000	96	208441	10.0	10.4	
12 Vinyl chloride	62	4.411	4.411	0.000	99	184272	2.00	2.45	
14 Butadiene	54	4.502	4.502	0.000	67	127598	2.00	2.44	
13 Butane	43	4.508	4.508	0.000	86	270721	2.00	2.53	
15 Bromomethane	94	4.847	4.847	0.000	98	173427	2.00	2.27	
16 Chloroethane	64	5.003	5.003	0.000	92	75554	2.00	2.19	
17 Ethanol	31	5.094	5.094	0.000	98	231496	10.0	14.2	
18 Vinyl bromide	106	5.325	5.325	0.000	96	139060	2.00	2.14	
19 2-Methylbutane	43	5.385	5.385	0.000	94	210665	2.00	2.45	
20 Trichlorofluoromethane	101	5.616	5.616	0.000	98	412863	2.00	2.34	
21 Acrolein	56	5.616	5.616	0.000	24	33410	2.00	2.02	
22 Acetonitrile	40	5.675	5.675	0.000	99	46875	2.00	2.56	
23 Acetone	58	5.729	5.729	0.000	92	132253	6.00	4.59	
24 Isopropyl alcohol	45	5.809	5.809	0.000	87	520221	6.00	6.84	
25 Pentane	72	5.847	5.847	0.000	97	24025	2.00	2.20	
26 Ethyl ether	31	6.014	6.014	0.000	86	143638	2.00	2.71	
27 1,1-Dichloroethene	96	6.353	6.353	0.000	95	117197	2.00	2.06	
28 2-Methyl-2-propanol	59	6.428	6.428	0.000	95	207902	2.00	2.22	
29 Acrylonitrile	53	6.444	6.444	0.000	94	68278	2.00	2.27	
30 1,1,2-Trichloro-1,2,2-trif	101	6.541	6.541	0.000	92	265297	2.00	2.17	
31 Methylene Chloride	84	6.708	6.708	0.000	94	111859	2.00	2.06	
32 3-Chloro-1-propene	39	6.729	6.729	0.000	92	129604	2.00	2.30	

May 23, 2014

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.885	6.885	0.000	99	425816	2.00	2.23	
34 trans-1,2-Dichloroethene	96	7.547	7.547	0.000	95	139756	2.00	2.04	
35 2-Methylpentane	43	7.574	7.574	0.000	96	390971	2.00	2.50	
36 Methyl tert-butyl ether	73	7.676	7.676	0.000	98	232505	2.00	2.25	
37 1,1-Dichloroethane	63	7.977	7.977	0.000	99	235250	2.00	2.20	
38 Vinyl acetate	43	8.074	8.074	0.000	100	233226	2.00	2.49	
39 2-Butanone (MEK)	72	8.526	8.526	0.000	96	42794	2.00	2.23	
40 Hexane	56	8.575	8.575	0.000	85	117695	2.00	2.16	
139 Isopropyl ether	45	8.725	8.725	0.000	96	361995	2.00	2.54	
41 cis-1,2-Dichloroethene	96	8.978	8.978	0.000	98	116635	2.00	1.99	
42 Ethyl acetate	43	9.150	9.150	0.000	96	229688	2.00	2.75	
43 Chloroform	83	9.328	9.328	0.000	96	248695	2.00	2.11	
142 Tert-butyl ethyl ether	59	9.414	9.414	0.000	98	298743	2.00	2.31	
44 Tetrahydrofuran	42	9.731	9.731	0.000	92	123060	2.00	2.62	
45 1,1,1-Trichloroethane	97	10.371	10.371	0.000	96	259780	2.00	2.11	
46 1,2-Dichloroethane	62	10.463	10.463	0.000	95	164701	2.00	2.42	
47 n-Butanol	31	10.877	10.877	0.000	95	56667	2.00	2.95	
48 Benzene	78	10.952	10.952	0.000	97	318972	2.00	2.12	
49 Cyclohexane	69	10.963	10.963	0.000	92	68281	2.00	2.30	
50 Carbon tetrachloride	117	10.979	10.979	0.000	91	244256	2.00	1.96	
51 2,3-Dimethylpentane	71	11.076	11.076	0.000	91	76498	2.00	2.15	
52 Thiophene	84	11.216	11.216	0.000	96	197959	2.00	2.13	
140 Tert-amyl methyl ether	73	11.404	11.404	0.000	89	267252	2.00	2.41	
53 Isooctane	57	11.700	11.700	0.000	96	587612	2.00	2.28	
54 n-Heptane	71	12.060	12.060	0.000	96	113389	2.00	2.13	
55 1,2-Dichloropropane	63	12.136	12.136	0.000	87	111660	2.00	2.19	
56 Trichloroethene	130	12.173	12.173	0.000	90	135545	2.00	1.86	
57 Dibromomethane	93	12.254	12.254	0.000	86	144585	2.00	2.16	
59 Dichlorobromomethane	83	12.394	12.394	0.000	97	237494	2.00	2.23	
58 1,4-Dioxane	88	12.399	12.399	0.000	95	42456	2.00	2.33	
60 Methyl methacrylate	41	12.475	12.475	0.000	93	138091	2.00	3.02	
61 Methylcyclohexane	83	12.943	12.943	0.000	91	208438	2.00	2.06	
62 4-Methyl-2-pentanone (MIBK	43	13.308	13.308	0.000	99	248206	2.00	2.70	
63 cis-1,3-Dichloropropene	75	13.373	13.373	0.000	98	151811	2.00	2.10	
64 trans-1,3-Dichloropropene	75	14.056	14.056	0.000	95	136630	2.00	2.31	
65 Toluene	91	14.191	14.191	0.000	91	282181	2.00	2.13	
66 1,1,2-Trichloroethane	83	14.255	14.255	0.000	96	95381	2.00	2.27	
67 2-Methylthiophene	97	14.341	14.341	0.000	99	252200	2.00	2.12	
68 3-Methylthiophene	97	14.540	14.540	0.000	99	248444	2.00	2.08	
69 2-Hexanone	58	14.626	14.626	0.000	90	109240	2.00	2.52	
70 n-Octane	85	14.869	14.869	0.000	97	104405	2.00	2.15	
71 Chlorodibromomethane	129	14.955	14.955	0.000	94	190771	2.00	2.06	
72 Ethylene Dibromide	107	15.245	15.245	0.000	97	154944	2.00	2.16	
73 Tetrachloroethene	129	15.326	15.326	0.000	87	119702	2.00	1.94	
75 Chlorobenzene	112	16.192	16.192	0.000	77	219303	2.00	1.94	
74 2,3-Dimethylheptane	43	16.203	16.203	0.000	93	404559	2.00	2.78	
76 Ethylbenzene	91	16.472	16.472	0.000	99	328053	2.00	2.24	
77 2-Ethylthiophene	97	16.574	16.574	0.000	98	255756	2.00	2.23	
78 m-Xylene & p-Xylene	91	16.633	16.633	0.000	98	521592	4.00	4.42	
79 n-Nonane	57	17.042	17.042	0.000	94	215837	2.00	2.35	
81 Bromoform	173	17.079	17.079	0.000	92	143103	2.00	1.96	
80 Styrene	104	17.096	17.096	0.000	96	174724	2.00	2.16	

May 23, 2014

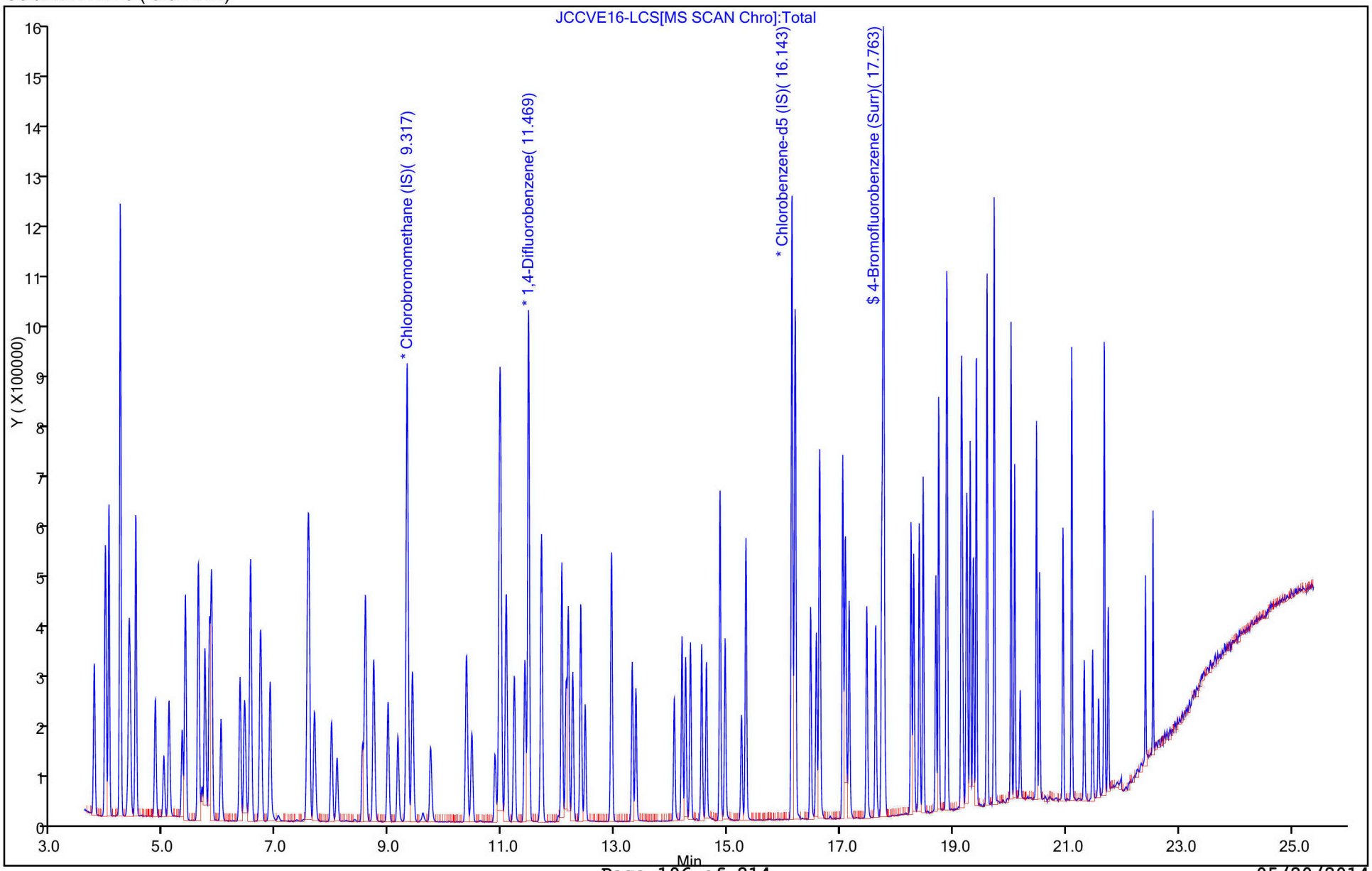
Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
82 o-Xylene	91	17.155	17.155	0.000	95	273665	2.00	2.29	
83 1,1,2,2-Tetrachloroethane	83	17.467	17.467	0.000	98	232192	2.00	2.38	
84 1,2,3-Trichloropropane	110	17.628	17.628	0.000	95	53800	2.00	2.30	
85 Isopropylbenzene	105	17.736	17.736	0.000	98	370063	2.00	2.17	
86 N-Propylbenzene	120	18.252	18.252	0.000	97	96235	2.00	2.14	
87 2-Chlorotoluene	126	18.301	18.301	0.000	98	94146	2.00	2.01	
88 4-Ethyltoluene	105	18.397	18.397	0.000	97	357795	2.00	2.25	
89 1,3,5-Trimethylbenzene	120	18.467	18.467	0.000	91	166345	2.00	2.08	
90 Alpha Methyl Styrene	118	18.693	18.693	0.000	81	126911	2.00	2.22	
91 n-Decane	57	18.742	18.742	0.000	86	239810	2.00	2.45	
92 tert-Butylbenzene	119	18.882	18.882	0.000	84	329541	2.00	2.11	
93 1,2,4-Trimethylbenzene	105	18.898	18.898	0.000	91	309982	2.00	2.24	
94 sec-Butylbenzene	105	19.145	19.145	0.000	97	458525	2.00	2.25	
95 1,3-Dichlorobenzene	146	19.161	19.161	0.000	97	168630	2.00	1.85	
96 Benzyl chloride	91	19.231	19.231	0.000	96	230769	2.00	2.23	
97 1,4-Dichlorobenzene	146	19.247	19.247	0.000	89	155497	2.00	1.83	
98 4-Isopropyltoluene	119	19.301	19.301	0.000	86	353619	2.00	2.17	
99 1,2,3-Trimethylbenzene	105	19.360	19.360	0.000	98	258941	2.00	2.29	
100 Butylcyclohexane	83	19.414	19.414	0.000	89	277614	2.00	2.15	
101 2,3-Dihydroindene	117	19.602	19.602	0.000	89	265840	2.00	2.10	
102 1,2-Dichlorobenzene	146	19.602	19.602	0.000	77	168049	2.00	1.89	
103 n-Butylbenzene	91	19.726	19.726	0.000	95	338822	2.00	2.24	
104 Indene	116	19.732	19.732	0.000	80	242203	2.00	2.19	
105 Undecane	57	20.027	20.027	0.000	92	253698	2.00	2.57	
106 1,2-Dimethyl-4-Ethylbenzen	119	20.092	20.092	0.000	97	309604	2.00	2.03	
108 1,2,4,5-Tetramethylbenzene	119	20.479	20.479	0.000	95	326672	2.00	2.13	
107 1,2,3,5-Tetramethylbenzene	119	20.533	20.533	0.000	94	204265	2.00	2.04	
109 1,2,3,4-Tetramethylbenzene	119	20.947	20.947	0.000	96	256105	2.00	2.06	
110 Dodecane	57	21.103	21.103	0.000	90	248325	2.00	2.43	
111 1,2,4-Trichlorobenzene	180	21.324	21.324	0.000	92	68954	2.00	1.74	
112 Naphthalene	128	21.474	21.474	0.000	98	206050	2.00	1.84	
113 Benzo(b)thiophene	134	21.582	21.582	0.000	98	124423	2.00	1.64	
114 Hexachlorobutadiene	225	21.684	21.684	0.000	81	131439	2.00	1.62	
115 1,2,3-Trichlorobenzene	180	21.749	21.749	0.000	94	85653	2.00	1.67	
116 2-Methylnaphthalene	142	22.411	22.411	0.000	100	112147	12.5	9.39	
117 1-Methylnaphthalene	142	22.545	22.545	0.000	100	136943	12.5	11.1	
141 1,2-Dibromo-3-Chloropropan	157	20.189	20.189	0.000	82	39816	NR	NR	
A 118 C6 Range	1	8.575	(8.515-8.634)		0	1492736	2.00	2.52	
A 122 Toluene Range	1	14.191	(14.161-14.221)		0	713549	2.00	2.21	
A 123 C8 Range	1	14.861	(14.820-14.917)		0	1205323	2.00	2.41	
S 124 Xylenes, Total	100				0		6.00	6.71	

Report Date: 19-May-2014 11:19:51 Chrom Revision: 2.2 14-Apr-2014 13:40:08

May 23, 2014

TestAmerica Laboratories

Data File:	\\KNXCHROM\ChromData\MJ\20140515-684.b\JCCVE16-LCS.d				
Injection Date:	16-May-2014 07:18:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



May 23, 2014

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Instrument ID: MJ Start Date: 03/11/2014 12:12

Analysis Batch Number: 946 End Date: 03/11/2014 23:33

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-946/1		03/11/2014 12:12	1	JBFBC11.D	RTX-5 0.32(mm)
IC 140-946/2		03/11/2014 12:40	1	JICC111.D	RTX-5 0.32(mm)
ZZZZZ		03/11/2014 12:40	1		RTX-5 0.32(mm)
IC 140-946/3		03/11/2014 13:35	1	JICC112.D	RTX-5 0.32(mm)
ZZZZZ		03/11/2014 13:35	1		RTX-5 0.32(mm)
IC 140-946/4		03/11/2014 14:29	1	JICC113.D	RTX-5 0.32(mm)
ZZZZZ		03/11/2014 14:29	1		RTX-5 0.32(mm)
IC 140-946/5		03/11/2014 15:23	1	JICC114.D	RTX-5 0.32(mm)
ZZZZZ		03/11/2014 15:23	1		RTX-5 0.32(mm)
IC 140-946/6		03/11/2014 16:17	1	JICC115.D	RTX-5 0.32(mm)
ICIS 140-946/7		03/11/2014 17:11	1	JICC116.D	RTX-5 0.32(mm)
ZZZZZ		03/11/2014 17:11	1		RTX-5 0.32(mm)
IC 140-946/8		03/11/2014 18:06	1	JICC117.D	RTX-5 0.32(mm)
IC 140-946/9		03/11/2014 19:02	1	JICC118.D	RTX-5 0.32(mm)
IC 140-946/10		03/11/2014 19:57	1	JICC119.D	RTX-5 0.32(mm)
ZZZZZ		03/11/2014 22:39	1		RTX-5 0.32(mm)
ICV 140-946/14		03/11/2014 23:33	1	JLCSC11.D	RTX-5 0.32(mm)

TO 15 LL

May 23, 2014

140311

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	Date	Time
BFB	16 - 101 mL	3/11/2014	12:12:53 PM
ICAL01	8 - 101 mL	3/11/2014	12:40:52 PM
ICAL02	8 - 202 mL	3/11/2014	1:34:59 PM
ICAL03	11 - 33 mL	3/11/2014	2:29:18 PM
ICAL04	11 - 80 mL	3/11/2014	3:23:49 PM
ICAL05	11 - 201 mL	3/11/2014	4:17:41 PM
ICAL06	12 - 200 mL	3/11/2014	5:11:27 PM
ICAL07	13 - 201 mL	3/11/2014	6:06:24 PM
ICAL08	15 - 100 mL	3/11/2014	7:02:10 PM
ICAL09	15 - 201 mL	3/11/2014	7:57:05 PM
BLK	16 - 201 mL	3/11/2014	8:51:32 PM
BLK	16 - 201 mL	3/11/2014	9:44:49 PM
MDLV992-01	8 - 50 mL	3/11/2014	10:39:32 PM
LCS /ICV	1 - 100 mL -use as ICV	3/11/2014	11:33:19 PM
ICV	2 - 201 mL	3/12/2014	12:27:51 AM

Page 1

May 23, 2014

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 14 & KNOX-MS-0023, Rev 1

Analysis Date:	3/11/14	Instrument:	MJ	Chrom WL #:	516	TALS Batch & Event #	TO14/15: 946 / 143	AFCEE: 947 / 144
							DOD: 948 / 145	OHIO: 949 / 146

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
3. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
4. Did BFB meet tune criteria? [F8]	✓		✓
5. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
6. High point checked for saturation and point removed if so? [Chrom]	✓		✓
7. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	NA		NA
8. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
9. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
10. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
11. Elution order checked on isomeric pairs? [Chrom]			✓
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3-, 1,4-, and 1,2-dichlorobenzene	✓		✓
• 1,2,4.5-, 1,2,3.5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
12. Upload ICAL.	✓		

Analyst: [illegible] Date: 3/14/14 | 2nd Level Reviewer: [illegible] Date: 3/14/14

Comments:

Comments:

MLG Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
13. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) [F6 Σ] acetone & α-methylstyrene	✓	✓	✓	✓		✓	✓	✓	✓
14. Were at least 5 levels of each compound analyzed? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
15. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
16. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	NA	→	→	→		NA	→	→	→
17. If curves were used, is correlation coefficient ≥0.990? [F6]	NA	→	→	→		NA	→	→	→
18. Is the intercept less than the RL for each curve? [F6]	NA	→	→	→		NA	→	→	→
19. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C. details]	NA	→	→			NA	→	→	
20. Is the second source analysis within limits? [F8 - icv] acetone @ 40% OK [illegible] 3/14/14	✓	✓	✓	✓	[illegible] 3/14/13 w/ LCS limits	✓	✓	✓	✓

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
21. Graphics uploaded? [Sample List Tab]	✓	✓	✓	✓		✓	✓	✓	✓
22. All points are in the most recent active calibration event? [Calibration Events – 'Fix ICAL linkage' if needed]	✓	✓	✓	✓		✓	✓	✓	✓
23. Runs linked to BFB? [QC Links]	✓	✓	✓	✓		✓	✓	✓	✓
24. If criteria not met, was a NCM generated?	NA	→	→	→		NA	→	→	→
25. After review in TALS, approve the method in TALS.						✓	✓	✓	✓
26. After verifying TALS is correct, lock method in Chrom <resolve any error issues>								✓	
27. Checklist & Entech report scanned, attached & assigned properly?						✓	✓	✓	✓

Analyst: [illegible] Date: 3/14/14 | 2nd Level Reviewer: [illegible] Date: 3/14/14

Comments: ULR @ 8 for acetone, α-methylstyrene, Indene, 124tclbz & #108-109 "extras" & 111

Comments:

MS017r37, 1/22/2014

May 23, 2014

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Instrument ID: MJ Start Date: 05/15/2014 10:00

Analysis Batch Number: 1222 End Date: 05/16/2014 04:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-1222/1		05/15/2014 10:00	1	JBFBE15.D	RTX-5 0.32(mm)
CCVIS 140-1222/2		05/15/2014 10:30	1	JCCVE15.D	RTX-5 0.32(mm)
LCS 140-1222/1002		05/15/2014 10:30	1	JCCVE15-LCS.d	RTX-5 0.32(mm)
MB 140-1222/4		05/15/2014 12:25	1	MB500mL.D	RTX-5 0.32(mm)
ZZZZZ		05/15/2014 13:17	1		RTX-5 0.32(mm)
ZZZZZ		05/15/2014 14:58	1		RTX-5 0.32(mm)
ZZZZZ		05/15/2014 15:52	1		RTX-5 0.32(mm)
ZZZZZ		05/15/2014 17:42	1		RTX-5 0.32(mm)
ZZZZZ		05/15/2014 18:37	1		RTX-5 0.32(mm)
140-1353-1	B2WM02	05/15/2014 19:33	1	JE15P106.D	RTX-5 0.32(mm)
140-1353-2	B2WM03	05/15/2014 20:33	1.57	JE15P107.D	RTX-5 0.32(mm)
140-1353-3	B2WM04	05/15/2014 21:32	1.47	JE15P108.D	RTX-5 0.32(mm)
ZZZZZ		05/16/2014 03:58	1		RTX-5 0.32(mm)
ZZZZZ		05/16/2014 04:56	1		RTX-5 0.32(mm)

TO 15 LL

May 23, 2014

140515

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	Date	Time
BFB	16 - 100 mL	5/15/2014	10:00:48 AM
CCV	4 - 102 mL	5/15/2014	10:30:35 AM
dnuleak	16 - 22 mL	5/15/2014	11:55:16 AM
BLANK	16 - 502 mL	5/15/2014	12:25:25 PM
BLANK	16 - 202 mL	5/15/2014	1:17:26 PM
dnuleak	16 - 21 mL	5/15/2014	2:30:31 PM
60646-03	1 - 25 mL	5/15/2014	2:58:15 PM
60646-04	2 - 25 mL	5/15/2014	3:52:18 PM
1315-04	3 - 10 mL	5/15/2014	4:47:19 PM
1348-01	4 - 200 mL	5/15/2014	5:42:23 PM
1348-02	5 - 200 mL	5/15/2014	6:37:18 PM
1353-01	6 - 500 mL E	5/15/2014	7:33:21 PM
1353-02	7 - 785 mL E	5/15/2014	8:33:03 PM
1353-03	8 - 735 mL E	5/15/2014	9:31:58 PM
1353-01	9 - 20 mL KR	5/15/2014	10:27:06 PM
1353-02	10 - 10 mL	5/15/2014	11:21:56 PM
1353-03	11 - 10 mL	5/16/2014	12:16:33 AM
1353-04	12 - 10 mL	5/16/2014	1:11:06 AM
1353-05	13 - 10 mL	5/16/2014	2:05:29 AM
1353-05	13 - 10 mL	5/16/2014	3:00:27 AM
BLK	14 - 500 mL	5/16/2014	3:58:06 AM
B01	15 - 500 mL	5/16/2014	4:56:05 AM

May 23, 2014

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist

Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 14 & KNOX-MS-0023, Rev 1

OH 10 1229 OH10 949 - 146

Analysis Date:	5/15/14	CCAL WL – Batch #	681 / 1222	Instrument:	MJ	ICAL WL / Batch # / Event #	516 / 946 / 143

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
3. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
4. Did BFB meet tune criteria? [F8]	✓	□ [Failed for TO-14A, but passes for TO-15] (NCM#_____)	✓
5. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
6. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
7. Is the %D ≤ 30% for all target analytes? [F8] [Sample Results Tab]	✓	□ CCV - %D - LCS criteria met (NCM#_____) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
8. Elution order checked on isomeric pairs? [Chrom]	✓		✓
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3-, 1,4-, and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
9. Has the RT been updated to the method?			

Analyst:	Date: 5/16/14	2nd Level Reviewer:	Date: 05/16/14
Comments:		Comments:	

10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
11. All runs - peaks ID'd correctly and false positives removed?	✓		✓
12. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
13. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample Reason Sample Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
14. Samples outside calibration range scheduled for dilution? *Samples:*	✓	□ ICAL – Range Exceeded; Minimum Dilution	✓
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample Reason Sample Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓

TALS Review	1st	If No, why is data reportable?	2nd
16. Graphics uploaded? [Sample List Tab]	✓		✓
17. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		

MS017r37, 1/22/2014

May 23, 2014

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 14 & KNOX-MS-0023, Rev 1

TALS Review	1st	If No, why is data reportable?	2nd
18. Sample special instructions verified?	✓		✓
19. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: Ohio does not allow for ME.	✓	☐ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) ☐ LCS/LCSD - %R High (NCM#_____)	✓
20. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
21. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
22. Analytes over calibration range set to secondary? [Conditions Review Tab]	✓		✓
23. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
24. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
25. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	500 mL blank ID: 122814 200 mL blank ID: 122815	✓
26. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
27. Correct ICV linked to each MB? [QC Links]	✓		✓
28. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
29. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
30. QC checker run and items addressed?			✓
31. Checklist & Entech report scanned, attached & assigned properly?			

Analyst:	Date: 5/16/14	2nd Level Reviewer :	Date: 05/16/14
Comments:		Comments:	

Example Calculation: 131514 ace.

On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF

3.5944 x 10 x 17.02 = 3058.83

Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed
>90	5
71 - 90	4
51 - 70	3
31 - 50	2
11 - 30	1
< 11	0

MS017r37, 1/22/2014

May 23, 2014

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-1353-1

SDG No.: W06725

Instrument ID: MJ Start Date: 05/16/2014 06:51

Analysis Batch Number: 1228 End Date: 05/17/2014 06:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-1228/1		05/16/2014 06:51	1	JBFBE16.D	RTX-5 0.32(mm)
CCVIS 140-1228/2		05/16/2014 07:18	1	JCCVE16.D	RTX-5 0.32(mm)
LCS 140-1228/1002		05/16/2014 07:18	1	JCCVE16-LCS.d	RTX-5 0.32(mm)
ZZZZZ		05/16/2014 08:45	1		RTX-5 0.32(mm)
MB 140-1228/5		05/16/2014 09:43	1	MB500mL.D	RTX-5 0.32(mm)
ZZZZZ		05/16/2014 10:37	1		RTX-5 0.32(mm)
ZZZZZ		05/16/2014 11:26	1		RTX-5 0.32(mm)
140-1353-1 DL	B2WM02 DL	05/16/2014 12:21	1	JE16P106.D	RTX-5 0.32(mm)
140-1353-2 DL	B2WM03 DL	05/16/2014 13:16	1.57	JE16P107.D	RTX-5 0.32(mm)
140-1353-3 DL	B2WM04 DL	05/16/2014 14:11	1.47	JE16P108.D	RTX-5 0.32(mm)
ZZZZZ		05/16/2014 15:05	1		RTX-5 0.32(mm)
ZZZZZ		05/16/2014 15:59	4.18		RTX-5 0.32(mm)
ZZZZZ		05/16/2014 16:54	1		RTX-5 0.32(mm)
ZZZZZ		05/16/2014 18:36	3.03		RTX-5 0.32(mm)
ZZZZZ		05/16/2014 19:29	4.35		RTX-5 0.32(mm)
ZZZZZ		05/16/2014 20:24	3.16		RTX-5 0.32(mm)
ZZZZZ		05/16/2014 21:18	16217.15		RTX-5 0.32(mm)
ZZZZZ		05/16/2014 22:13	13567.99		RTX-5 0.32(mm)
ZZZZZ		05/16/2014 23:08	14490.46		RTX-5 0.32(mm)
ZZZZZ		05/17/2014 00:03	14522.94		RTX-5 0.32(mm)
ZZZZZ		05/17/2014 00:58	15216.83		RTX-5 0.32(mm)
ZZZZZ		05/17/2014 01:53	14921.13		RTX-5 0.32(mm)
ZZZZZ		05/17/2014 02:50	1		RTX-5 0.32(mm)
ZZZZZ		05/17/2014 03:45	1		RTX-5 0.32(mm)
ZZZZZ		05/17/2014 04:40	1		RTX-5 0.32(mm)
ZZZZZ		05/17/2014 05:34	1		RTX-5 0.32(mm)
ZZZZZ		05/17/2014 06:29	1		RTX-5 0.32(mm)

TO 15 LL

May 23, 2014

140516

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	Date	Time
BFB	16 - 101 mL	5/16/2014	6:51:04 AM
CCV	15 - 100 mL	5/16/2014	7:18:16 AM
dnuleak	16 - 21 mL	5/16/2014	8:17:28 AM
BLANK	16 - 201 mL	5/16/2014	8:45:21 AM
BLANK	16 - 501 mL	5/16/2014	9:43:10 AM
47906-01	1 - 10 mL	5/16/2014	10:37:18 AM
47906-02	2 - 10 mL	5/16/2014	11:26:46 AM
1353-01	6 - 52 mL	5/16/2014	12:21:05 PM
1353-02	7 - 200 mL	5/16/2014	1:16:23 PM
1353-03	8 - 100 mL	5/16/2014	2:11:07 PM
1347-01	9 - 200 mL	5/16/2014	3:05:27 PM
1347-02	10 - 100 mL	5/16/2014	3:59:32 PM
47922-01BAG	8 - 10 mL	5/16/2014	4:54:10 PM
dnuleak	16 - 51 mL	5/16/2014	6:08:29 PM
1347-03	11 - 50 mL	5/16/2014	6:36:11 PM
1347-04	12 - 100 mL	5/16/2014	7:29:50 PM
1347-05	13 - 50 mL	5/16/2014	8:24:12 PM
1352-01	14 - 20 mL	5/16/2014	9:18:02 PM
1352-02	15 - 20 mL	5/16/2014	10:13:18 PM
1352-03	1 - 20 mL	5/16/2014	11:08:29 PM
1352-04	2 - 20 mL	5/17/2014	12:03:40 AM
1352-05	3 - 20 mL	5/17/2014	12:58:51 AM
1352-06	4 - 20 mL	5/17/2014	1:53:29 AM
1355	5 - 500 mL	5/17/2014	2:50:29 AM
1356	6 - 502 mL	5/17/2014	3:45:37 AM
1313	7 - 201 mL	5/17/2014	4:40:11 AM
1366-01	8 - 102 mL	5/17/2014	5:34:51 AM
1366-01d	8 - 101 mL	5/17/2014	6:29:04 AM

May 23, 2014

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 14 & KNOX-MS-0023, Rev 1

Analysis Date:	5/16/14	CCAL WL – Batch #	684 / 1228	Instrument:	MJ	ICAL WL / Batch # / Event #	516 / 946 / 143

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
3. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
4. Did BFB meet tune criteria? [F8]	✓	□ [Failed for TO-14A, but passes for TO-15] (NCM#_____)	✓
5. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
6. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
7. Is the %D ≤ 30% for all target analytes? [F8] [Sample Results Tab] Dichlorodifluoromethane J1347 MIBK, ethyl Ether J1352	✓	☑ CCV - %D - LCS criteria met (NCM# 1293) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
8. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
9. Has the RT been updated to the method?	✓		✓
Analyst: [signature] **Date:** 5/19/14		**2nd Level Reviewer :** [signature] **Date:** 05/19/14	
Comments:		**Comments:**	
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
11. All runs - peaks ID'd correctly and false positives removed?	✓		✓
12. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
13. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample ____ Reason ____ Sample ____ Reason ____	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
14. Samples outside calibration range scheduled for dilution? *Samples:*	✓	□ ICAL – Range Exceeded; Minimum Dilution	✓
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample elevr Reason NCM 1292 Sample ____ Reason ____ 1347/2-5	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
TALS Review	1st	**If No, why is data reportable?**	2nd
16. Graphics uploaded? [Sample List Tab]	✓		
17. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?			

MS017r37, 1/22/2014

May 23, 2014

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 14 & KNOX-MS-0023, Rev 1

TALS Review	1st	If No, why is data reportable?	2nd
18. Sample special instructions verified?	✓		✓
19. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: Ohio does not allow for ME.	✓	☐ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) ☐ LCS/LCSD - %R High (NCM#_____)	✓
20. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
21. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
22. Analytes over calibration range set to secondary? [Conditions Review Tab]	✓		✓
23. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
24. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
25. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	500 mL blank ID: 122815 200 mL blank ID: 122814	✓
26. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
27. Correct ICV linked to each MB? [QC Links]	✓		✓
28. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
29. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
30. QC checker run and items addressed?			✓
31. Checklist & Entech report scanned, attached & assigned properly?			✓

Analyst:	Date: 5/19/14	2nd Level Reviewer :	Date: 05/19/14
Comments:		Comments:	

Example Calculation: 1347-2 bkn3

On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF

0.039128 x 100mL x 4.18 =

0.8174

MS017r37, 1/22/2014

May 23, 2014

Summa Canister Dilution Worksheet

Client: CH2M Hill Plateau Remediation Company

Job No.: 140-1353-1
SDG No.: W06725

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Date	Analyst
140-1353-2	6	-9.2	0.69	4.16	1.3	1.09	6.53		1.57	1.57	05/14/14 18:41	Barlozhetskaya, Anna F
140-1353-3	6	-8.2	0.73	4.36	1.0	1.07	6.41		1.47	1.47	05/14/14 18:41	Barlozhetskaya, Anna F

Formulae:

Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg

Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig

Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury (“Hg)

14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

Shipping and Receiving Documents

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-025-063	PAGE 1 OF 1
COLLECTOR B. BRIGGS	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 9C AIR QUALITY ☐	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 289-T VOG Stack smp shed VAL ~~V74-Y62~~ V55-Y62 01 JLH 5/8/14	PROJECT DESIGNATION 200W Pump & Treat - ETBs and BioTreatment VOC Sampling - Gaseous		SAF NO. F12-025		
ICE CHEST NO. FB-1	FIELD LOGBOOK NO. HWF.N.507.21	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica Knoxville	OFFSITE PROPERTY NO. SEE PTR		BILL OF LADING/AIR BILL NO. N/A 7988 4452 6631		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None
HOLDING TIME	30 Days
TYPE OF CONTAINER	Summa Canister
NO. OF CONTAINER(S)	1
VOLUME	6L
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2VM02	GASEOUS	5/13/14	0811	✓

140-1353 Chain of Custody

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
B.E. Briggs / B. Briggs	5/13/14 1500	FEDEX	5/13/14
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-14-089
(1) TO-15_VOA: COMMON {1,1,1-Trichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, Acetone, Benzene, Carbon tetrachloride, Chloroform, Dibromochloromethane, Methylene chloride, Trichloroethene, Vinyl chloride};

TRVL 14- 088

LABORATORY SECTION	RECEIVED BY KU 5/14/14 0940	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 5/6/2014

A-6003-618 (REV 2)

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-025-064	PAGE 1 OF 1
COLLECTOR B.E. BRIGGS.	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 9C	DATA TURNAROUND
SAMPLING LOCATION 289-T VOG Stack smp shed VAL ~~V74-Y62~~ V55-Y62 02 JLH 5/8/14	PROJECT DESIGNATION 200W Pump & Treat - ETBs and BioTreatment VOC Sampling - Gaseous		SAF NO. F12-025	AIR QUALITY ☐	15 Days / 15 Days
ICE CHEST NO. FB-1	FIELD LOGBOOK NO. HNF-N 507-21	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica Knoxville	OFFSITE PROPERTY NO. SEE PTR		BILL OF LADING/AIR BILL NO. N/A 7988 4452 6621		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None
HOLDING TIME	30 Days
TYPE OF CONTAINER	Summa Canister
NO. OF CONTAINER(S)	1
VOLUME	6L
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2WM03	GASEOUS	05/13/14	0912	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM BE. Briggs / B.E. Briggs	DATE/TIME 5/8/14 1500	RECEIVED BY/STORED IN FEDEX	DATE/TIME 5/8/14
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-14-089
(1) TO-15_VOA: COMMON {1,1,1-Trichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, Acetone, Benzene, Carbon tetrachloride, Chloroform, Dibromochloromethane, Methylene chloride, Trichloroethene, Vinyl chloride};

TRVL- 14- 088

LABORATORY SECTION	RECEIVED BY Ken Wilk KW 5/14/14 0940	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 5/6/2014

A-6003-618 (REV 2)

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May 23, 2014
05/20/2014

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-025-065	PAGE 1 OF 1
COLLECTOR B.E. BRIGGS	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 9C	DATA TURNAROUND
SAMPLING LOCATION 289-T VOG Stack smp shed VAL ~~V74-Y62~~ V55-Y62 03 JLH 5/8/14	PROJECT DESIGNATION 200W Pump & Treat - ETBs and BioTreatment VOC Sampling - Gaseous		SAF NO. F12-025	AIR QUALITY ☐	15 Days / 15 Days
ICE CHEST NO. FB-1	FIELD LOGBOOK NO. HWF-N 557-21	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica Knoxville	OFFSITE PROPERTY NO. SEE PTR		BILL OF LADING/AIR BILL NO. N/A ~~7988 4452 6621~~ 7988 4452 6621		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None
HOLDING TIME	30 Days
TYPE OF CONTAINER	Summa Canister
NO. OF CONTAINER(S)	1
VOLUME	6L
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2WM04	GASEOUS	5/13/14	1013	✓

Received @ ambient
Custody seal intact
1 box
KW 5/14/14
fedex PO
trk# 7988 4452 6621

May 23, 2014

Page 2 of 214

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
B.E. Briggs / B.E. Briggs	5/13/14 1000	FEDEX	5/13/14
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-14-089
(1) TO-15_VOA: COMMON {1,1,1-Trichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, Acetone, Benzene, Carbon tetrachloride, Chloroform, Dibromochloromethane, Methylene chloride, Trichloroethene, Vinyl chloride};

TRVL- 14- 088

LABORATORY SECTION	RECEIVED BY KW 5/14/14 0940	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 5/6/2014

A-6003-618 (REV 2)

5/20/2014

May 23, 2014

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G1

Analyst	Date	Sample ID	6 L	1 L	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	5/14/2014	140-1353-a-1	X		+0.5	1840	
AFB	5/14/2014	140-1353-a-2	X		-9.2	1841	
AFB	5/14/2014	140-1353-a-3	X		-8.2	1842	

May 23, 2014

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 140-1353-1
SDG Number: W06725

Login Number: 1353
List Source: TestAmerica Knoxville
List Number: 1
Creator: Wilson, Ken

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	N/A	This is checked in the lab.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	